EL-MOASSER

# Mathematics

By a group of supervisors

## PARENTS' GUIDE

بتصريح وتحت إشراف

وزارة التربية والتعليم والتعليم الفني

MINISTRY OF EDUCATION AND TECHNICAL EDUCATION

معاك

Ma3ak App

Interactive Application For Distance Learning



STICKERS INCLUDED

3rd Primary 2021

FIRST TERM

# Revision




In this revision your child will review on what he/she had learned in primary two.

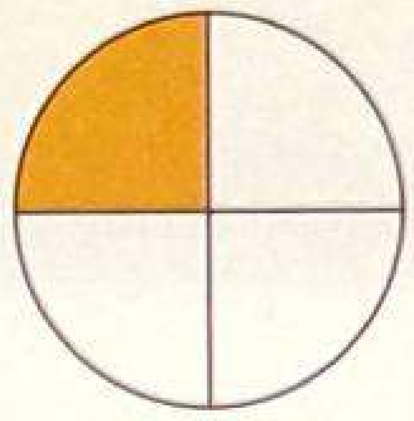
# Revision 1

**1** Write odd or even.

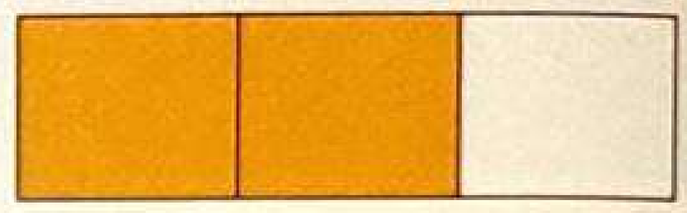
31 ______ 42 ______

90 ______ 87 ______

**2** Write the fraction for the colored part of the shape.



$\frac{__}{__}$ ( ______ )



$\frac{__}{__}$ ( ______ )

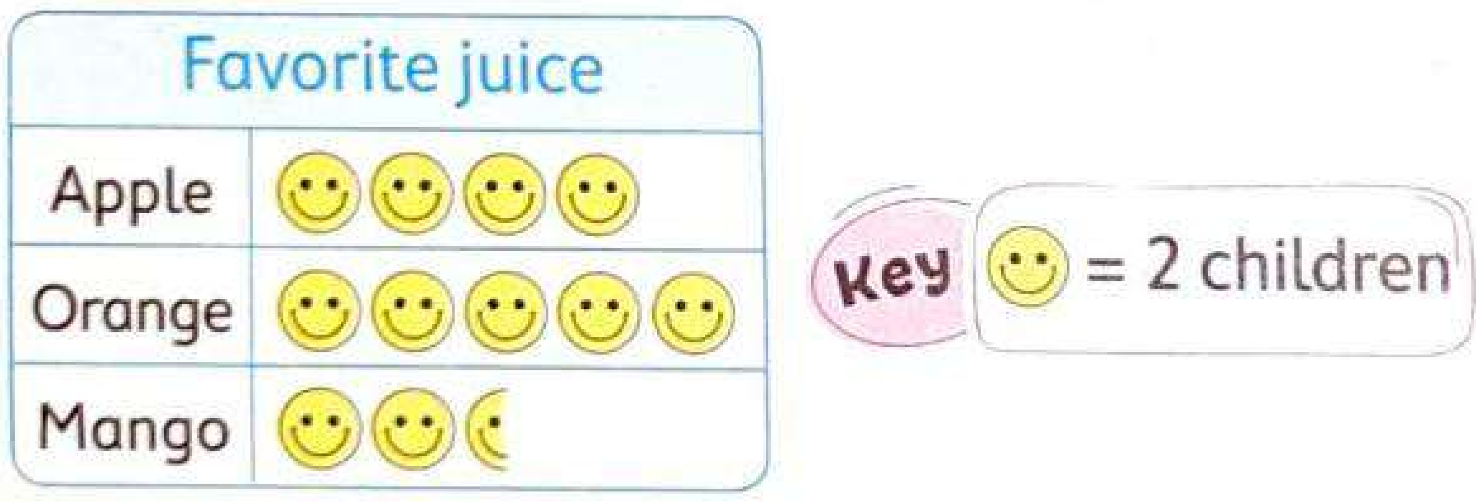
**3** What is the sum ?

549 + 328 = ______

○ 977 ○ 867

○ 967 ○ 877

**4** Use the pictograph. How many children like mango juice best ?




○ 4 ○ 5

○ 8 ○ 9

**5** Name the solid and write the missing number.



Name : ______

______ vertices ______ edges ______ faces

**6** Write the following numbers in standard form.

- eleven ______
- seventy ______
- thirteen ______
- eight ______

**7** A grocer had 750 cans of soft drinks. He sold 415 of them.

How many cans are left ?

______

______

**8** Compare using > , < or =.

138 ○ 146

599 ○ 499

368 ○ 300 + 60 + 8

# Revision 2

**1** Count the amount. Write the total.




______ L.E.

Can you buy the ball ?

◯ Yes ◯ No

**2** Write the time.



____ : ____

**3** Subtract.

$$\begin{array}{r} 473 \\ -\ 228 \\ \hline \end{array}$$

**4** Follow the rule. Extend the pattern.

| The rule | The pattern |
|---|---|
| +3 | 62, ___, ___, ___, ___, ___ |
| -2 | 48, ___, ___, ___, ___, ___ |

**5** Arrange from the smallest to the greatest.

345 354 298 346

Order is : ___, ___, ___, ___

**6** Choose.

Number of vertices of a cube is ______

◯ 5 ◯ 6

◯ 8 ◯ 12

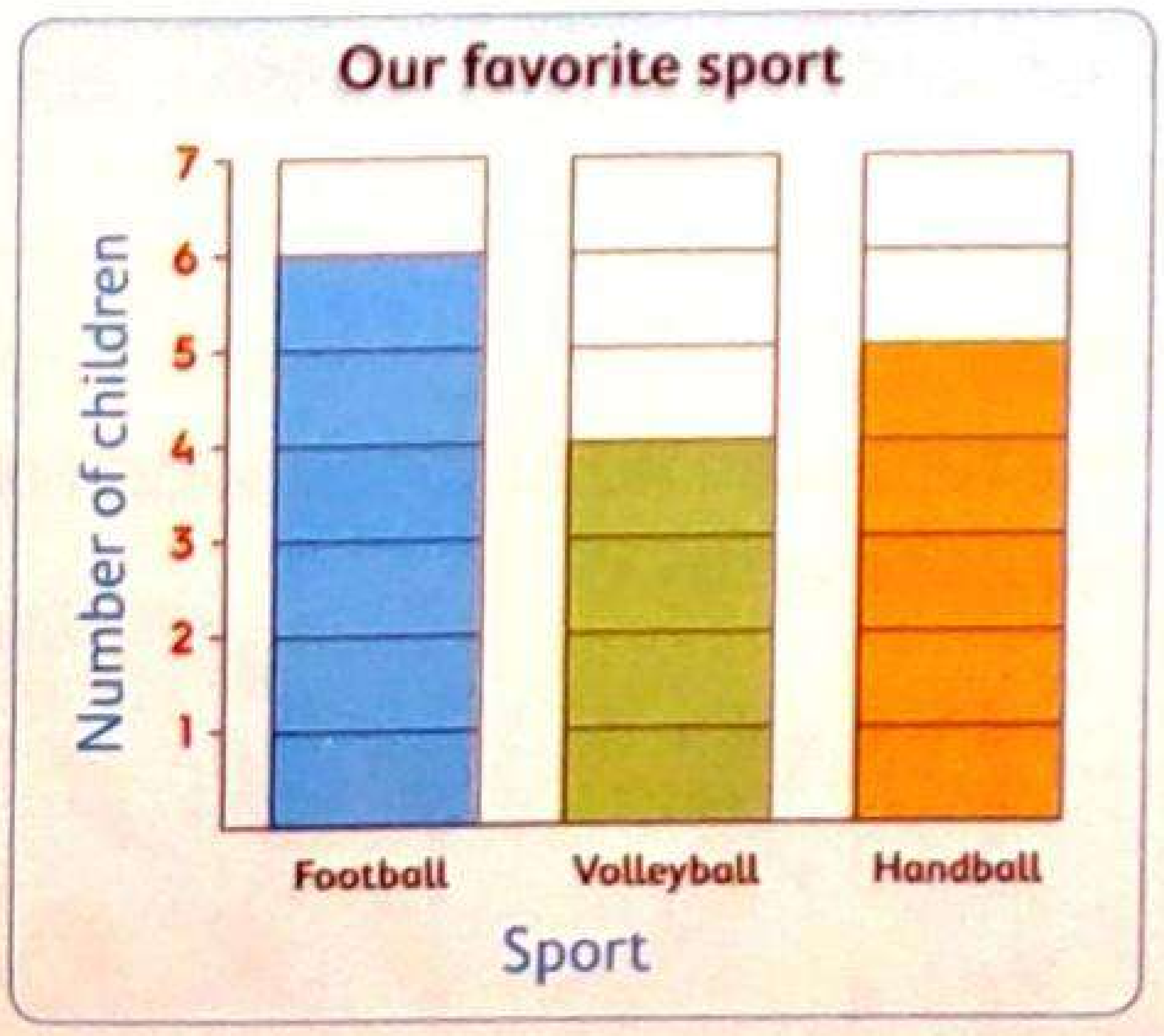
**7** Round each number to the nearest hundred.

- 95 ______
- 261 ______
- 739 ______

**8** 238 hot dog sandwiches were sold. 415 burger sandwiches were sold. How many sandwiches were sold together ?

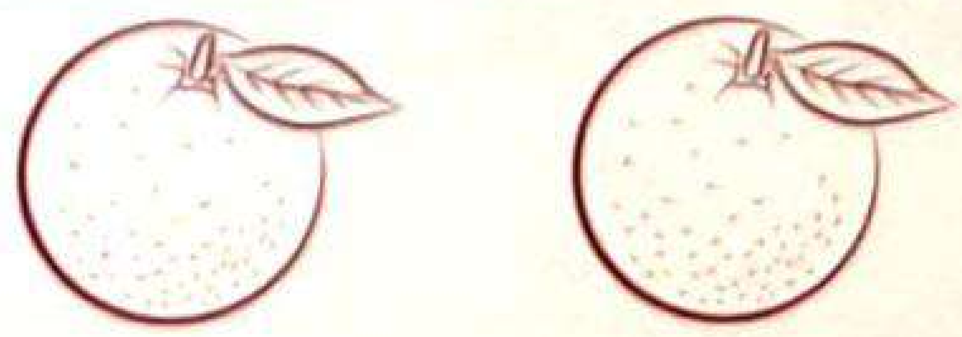
______

**9** Use the bar graph. How many more children chose football than volleyball ?

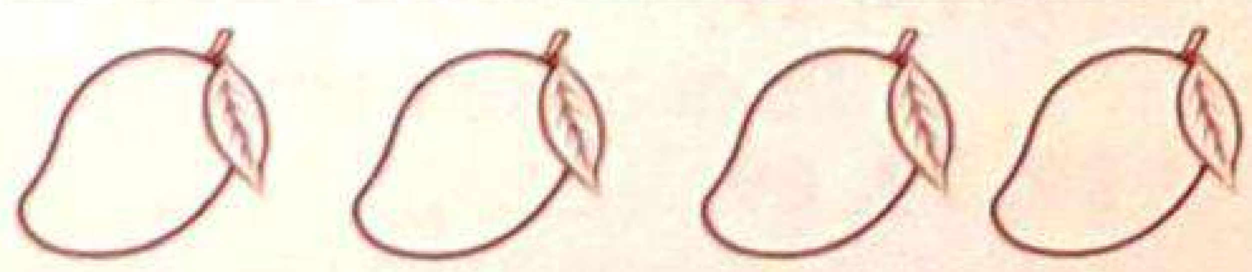



◯ 1 ◯ 2 ◯ 3 ◯ 4

**10** Color to show the fraction.



$\frac{1}{2}$ of the oranges are orange.



$\frac{3}{4}$ of the mangoes are green.

# Revision 3

**1** Complete.

- ______ = 700 + 50 + 4
- Number of sides of a triangle is ______
- Two thirds = $\frac{\quad}{\quad}$
- 19 − ______ = 10
- Five hundred fifteen in standard form is ______

**2** Add to find the total.

23 + 14 + 39 + 16

______

______

**3** Choose.

The mass of  is about ______

◯ 1 gm ◯ 5 kg

◯ 50 kg ◯ 100 kg

**4** Choose.

61 + 28 is about ______

◯ 80 ◯ 70

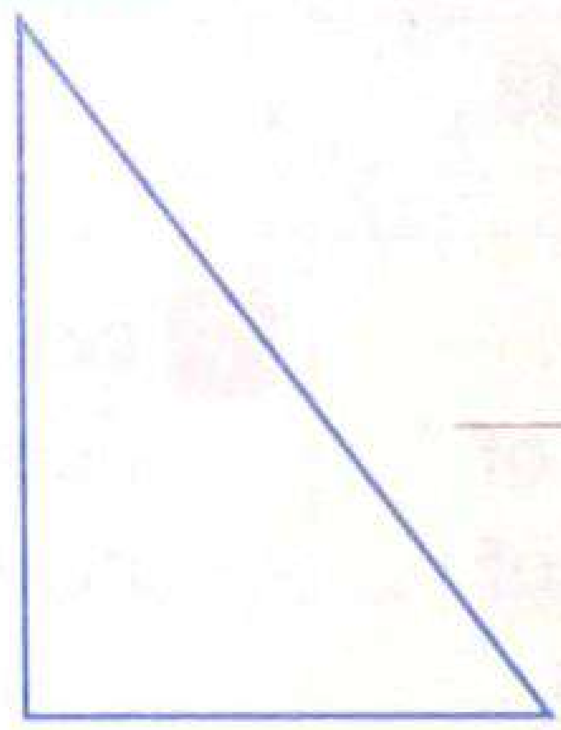
◯ 90 ◯ 40

**5** Draw the hour hand and the minute hand.






**6** Measure and write the length of required sides.



______ cm ______ cm

______ cm

**7** Count the amount and write the total.



______ L.E.



______ L.E.

**8** Omar has 354 pounds.
He gave his sister Mariam 160 pounds.
How much money does he have left ?

______

______

**9** Complete each pattern.

- 13, 15, 17, ______, ______, ______
- 89, 79, 69, ______, ______, ______
- 5, 10, 15, ______, ______, ______

**10** Choose.

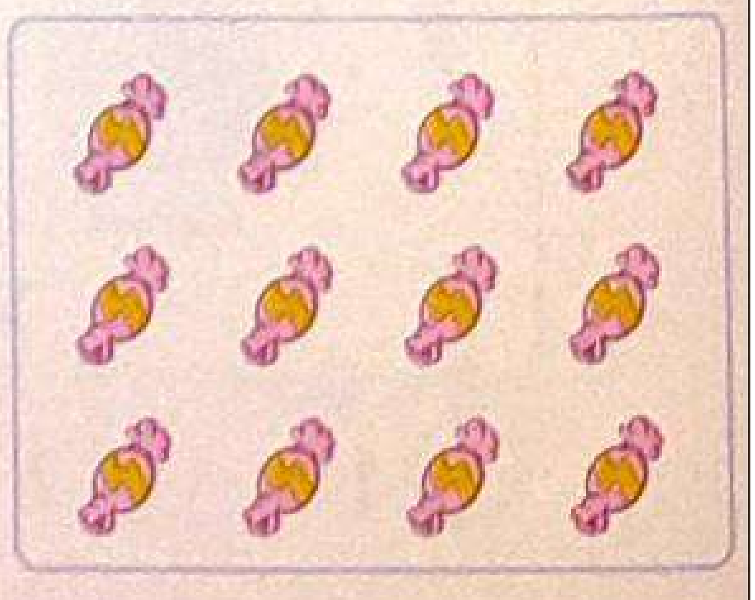
The repeated addition equation of the opposite array is ______

◯ 4 + 4 + 4 + 4

◯ 3 + 3 + 3

◯ 4 + 4

◯ 3 + 3 + 3 + 3



# Revision 4

**1** Complete.

- Number of vertices of trapezium is ______
- The number of rows of the array 3 by 5 is ______
- The value of 7 in the number 678 is ______
- ______ − 19 = 7

**2** Dalia baked a pizza and cut it into three equal pieces. Her brother ate one of them. What fraction of the pizza left ?

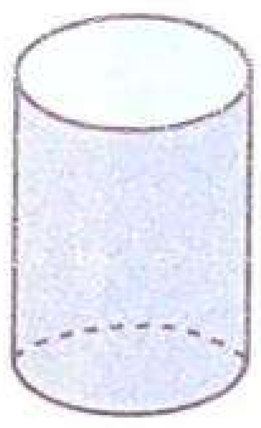
The fraction is $\frac{___}{___}$



**3** Add.

| 257 | 139 |
|---|---|
| + 81 | + 440 |
| ______ | ______ |

**4** Name the solid and write the missing number.



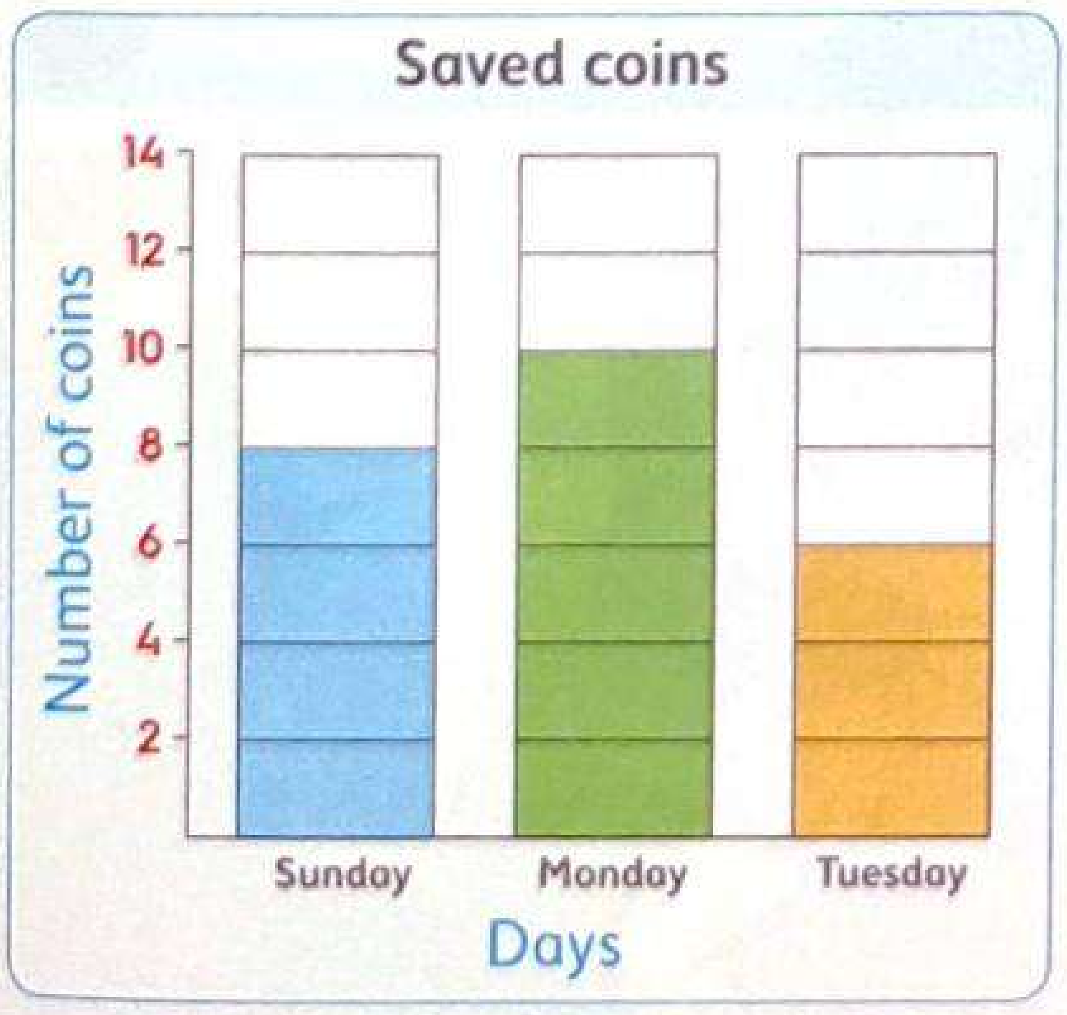
Name : ______

______ vertices ______ edges ______ flat faces

**5** Subtract.

| 459 | 308 |
|---|---|
| − 226 | − 120 |
| ______ | ______ |

**6** Use the bar graph. How many coins are saved on Monday ?




○ 5
○ 8
○ 10
○ 6

**7** Arrange from the greatest to the smallest.

129 291 219 192

Order is : ______ , ______ , ______ , ______

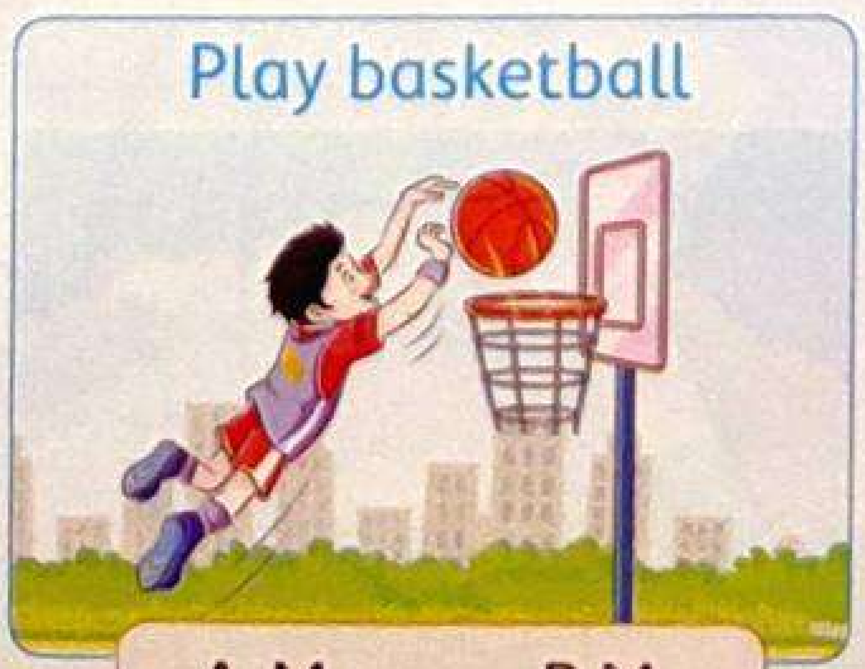
**8** Write the following numbers in words.

- 80 ______
- 5 ______
- 14 ______
- 60 ______

**9** Write the time. Then circle A.M. or P.M.




______ : ______




A.M. P.M.

**10** A fruit seller bought 67 kilograms of orange and 85 kilograms of apple. What is the weight in all ?

______

______

# Chapter 1



## Outcomes

**At the end of chapter one, your child will be able to:**

### Lesson 1

- Identify repeating and number patterns.
- Determine the next two elements in a pattern.

### Lesson 2

- Identify elements of a bar graph.
- Organize, represent, and analyze data from a bar graph.

### Lesson 3

- Identify the elements of a pictograph.
- Create a pictograph from a data table.
- Explain the meaning of scale in a pictograph.
- Determine an appropriate graphing question.

### Lesson 4

- Identify the elements of a line plot.
- Create a line plot.
- Collect and record data.

### Lessons 5 to 7

- Discuss centimeter measurement.
- Measure the lengths of objects in centimeters.
- Estimate the lengths of objects in centimeters and meters.
- Discuss meter measurement.
- Demonstrate understanding of the relationship between centimeters and meters.
- Determine whether to use centimeters or meters to measure length.
- Use measurement data to create a line plot.

### Lesson 8

- Demonstrate understanding that centimeters are composed of millimeters.
- Measure the lengths of objects in millimeters.
- Describe the pattern when measuring the same object in millimeters and centimeters.

### Lessons 9 to 10

- Use a table to record data.
- Create a line plot using his/her collected data.
- Explain how he/she will use his/her new learning in daily life.

## Key vocabulary

- Elements
- Visual pattern
- Horizontal
- Key
- Length
- Units
- Increase
- Bar graph
- Vertical
- Line plot
- Centimeter
- Estimate
- Pattern
- Scale
- Tally marks
- Number line
- Meter
- Number pattern
- Axis
- Pictograph
- Frequency
- Millimeter

Lesson 1

# Patterns

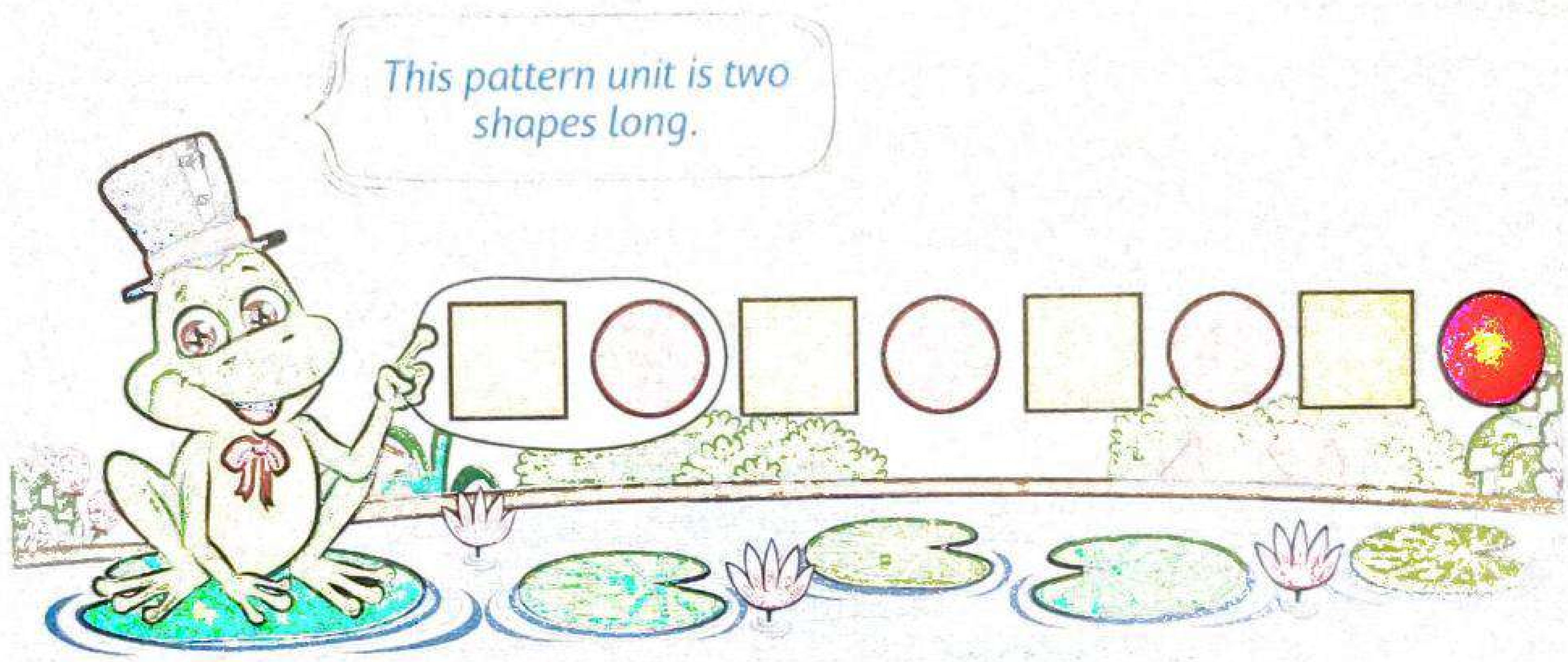
## Pre-study Visual pattern

- In this visual pattern the pattern unit helps you predict what comes next.

*Vocabulary*

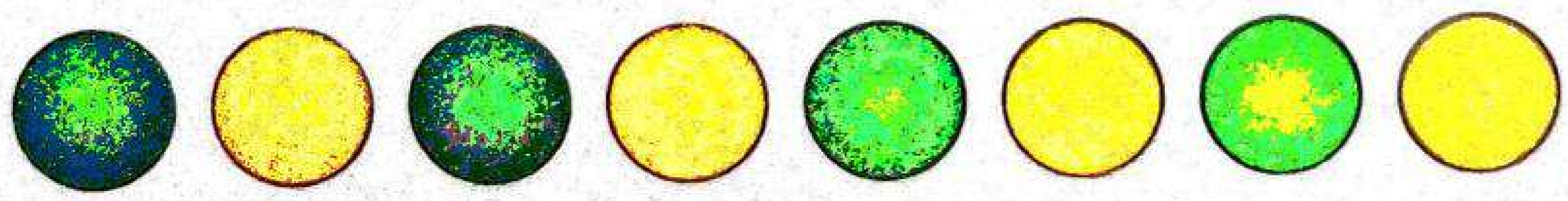
*Pattern* is an ordered set of numbers or subjects.

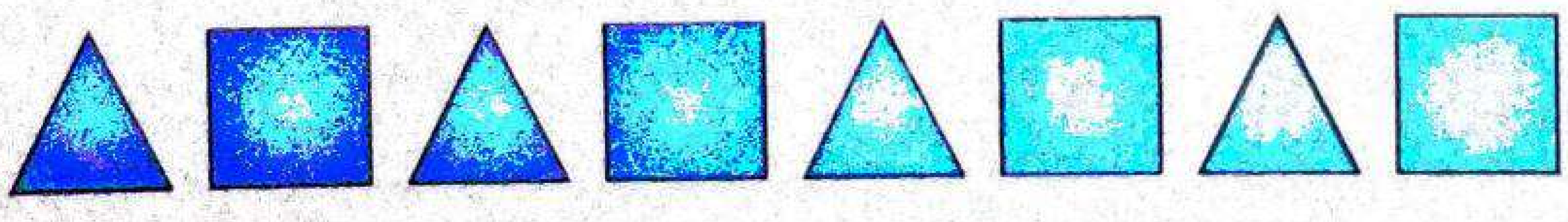
*Pattern unit* is the part of pattern that repeats.

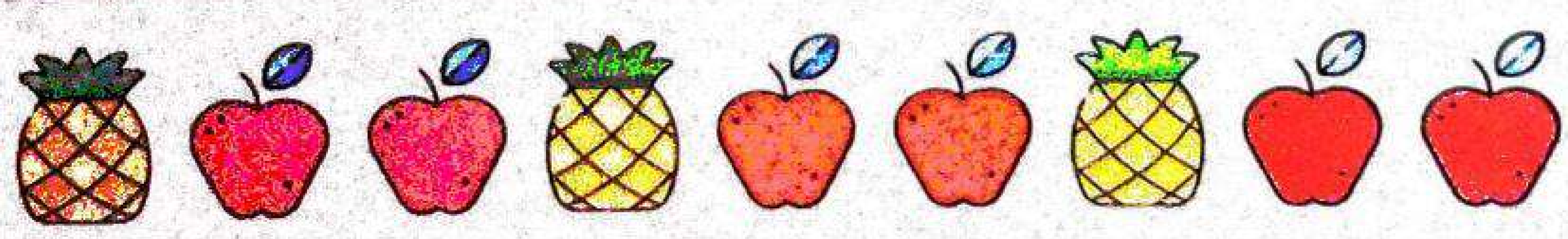



## Check

Name the pattern unit to predict what comes next and circle it.





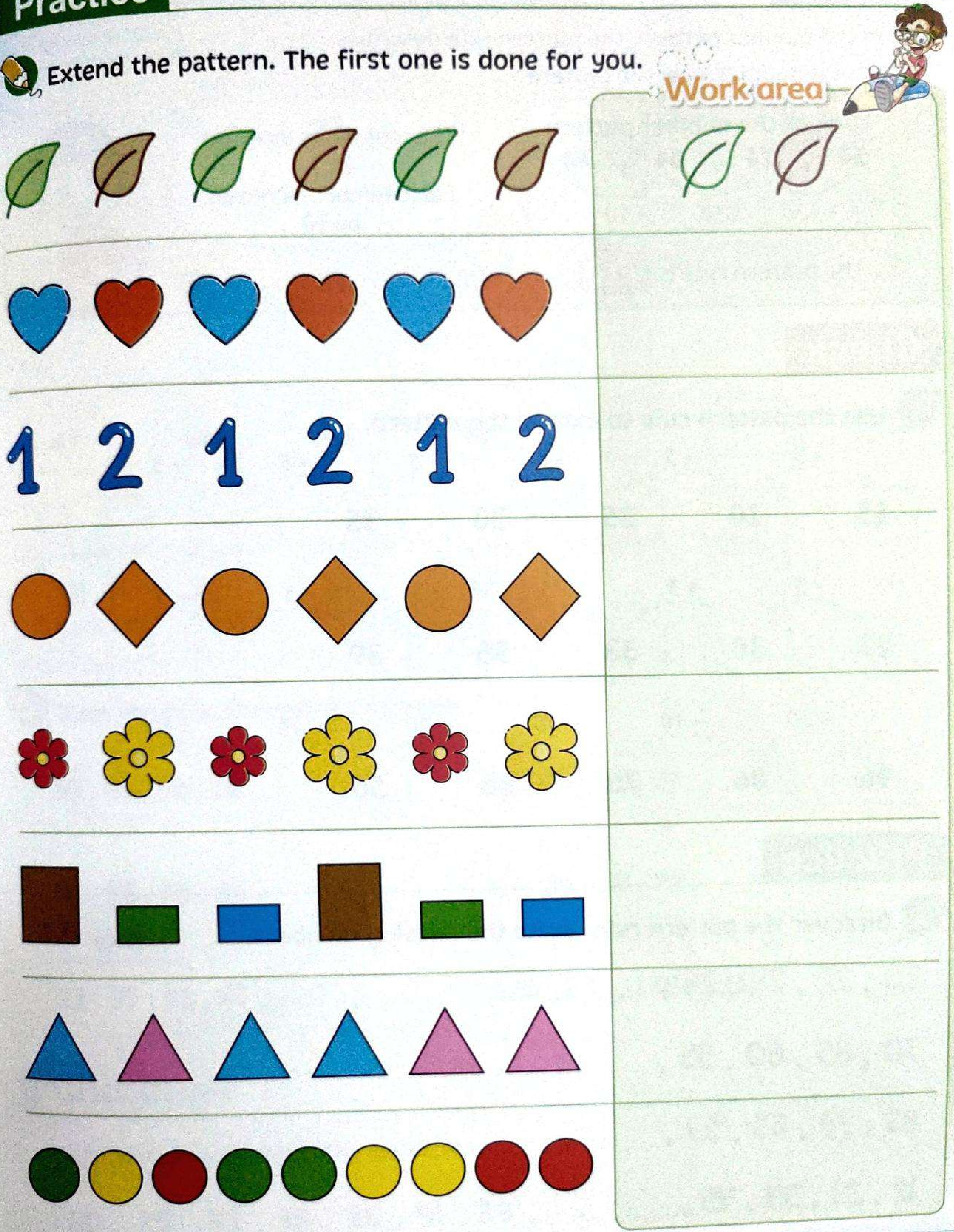


**Notes for parents**

- Ask your child to find examples of patterns in your home.

## Practice

Extend the pattern. The first one is done for you.




• Let your child use colored buttons and ask him/her to make a visual pattern.

## Learn Numbers pattern

*Vocabulary*
**Number pattern** is a list of numbers that follow a certain rule.

In the **number pattern**, the pattern rule describes what is happening in the pattern.

Look at the number pattern

14 , 24 , 34 , 44

(+10) (+10) (+10)

The tens digits increase by 1
Each number increases by 10



So, the pattern rule is +10

## Check

Use the pattern rule to extend the pattern.

| +5 | +5 | +5 | +5 | +5 | +5 |
|---|---|---|---|---|---|

15, 20, 25, 30, 35, ____, ____

| +3 | +3 | +3 | +3 | +3 | +3 |
|---|---|---|---|---|---|

27, 30, 33, 36, 39, ____, ____

| −10 | −10 | −10 | −10 | −10 | −10 |
|---|---|---|---|---|---|

96, 86, 76, 66, 56, ____, ____

## Practice

Discover the pattern rule. Write the missing numbers. **Rule**

20 , 22 , 24 , 26 , ______ , ______ [ ]

70 , 65 , 60 , 55 , ______ , ______ [ ]

83 , 73 , 63 , 53 , ______ , ______ [ ]

12 , 23 , 34 , 45 , ______ , ______ [ ]

**Notes for parents**

• Practice your child skip-counting by twos, threes, fours, fives and tens.

Find the pattern rule. Complete the patterns.

21 → 31 → 41 → 51 → ____ → ____

54 → 56 → 58 → 60 → ____ → ____

49 → 46 → 43 → 40 → ____ → ____

10 → 22 → 34 → 46 → ____ → ____

Find the rule. Extend the pattern.

| | |
|---|---|
| 30 , 40 , 50 , 60 , ____ , ____ | 39 , 35 , 31 , 27 , ____ , ____ |
| 98 , 88 , 78 , 68 , ____ , ____ | 63 , 66 , 69 , 72 , ____ , ____ |
| 33 , 37 , 41 , 45 , ____ , ____ | 120 , 125 , 130 , 135 , ____ , ____ |

## Challenge

- Find the rule. Extend the pattern.

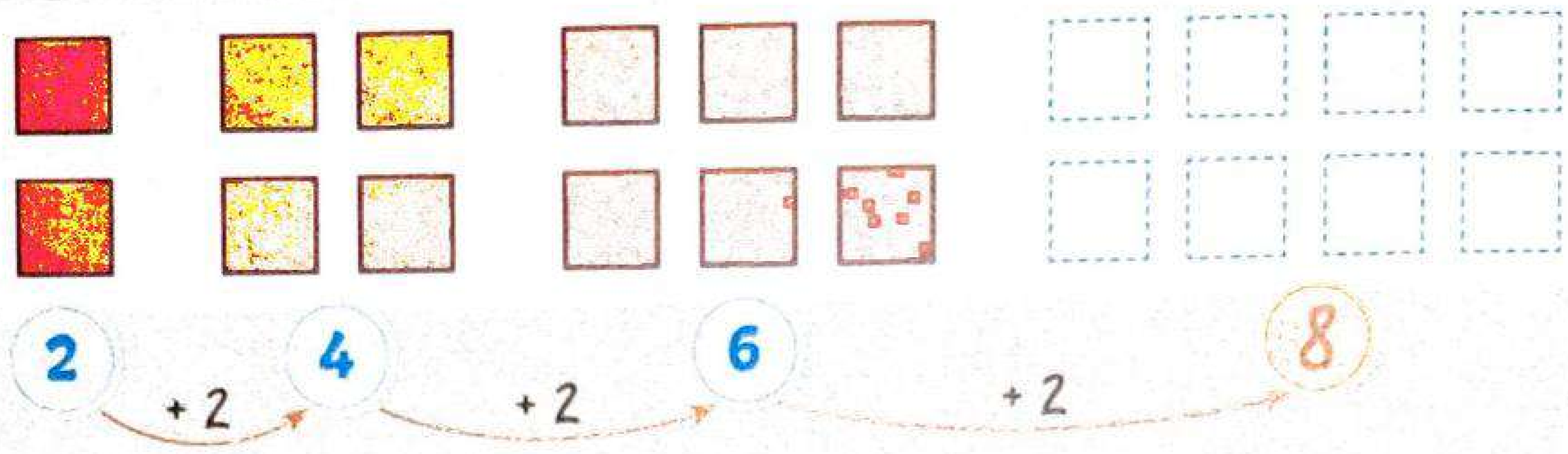
30 , 35 , 33 , 38 , 36 , 41 , 39 , ____ , ____

- Ask your child to find the rule and follow it to complete the patterns.

## Learn

Each step 2 more squares than the last step. The squares are added to the side.

- In this pattern you can predict
  What might come next in the pattern?

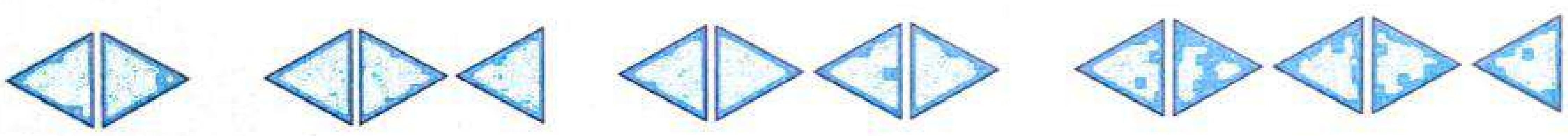




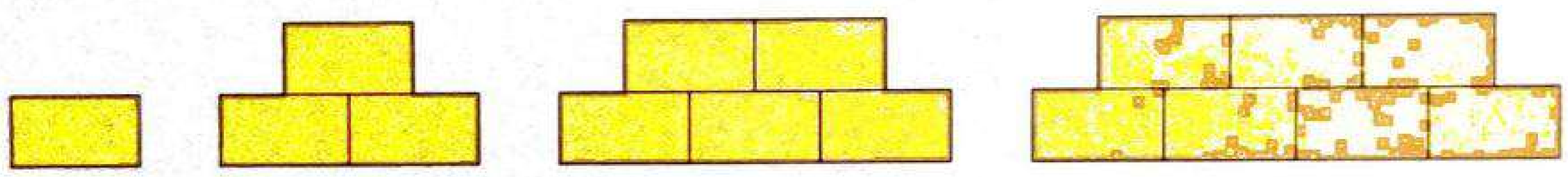

**So,** The next step has 8 squares.

## Check

**Extend the pattern. Write the number of items you draw.**



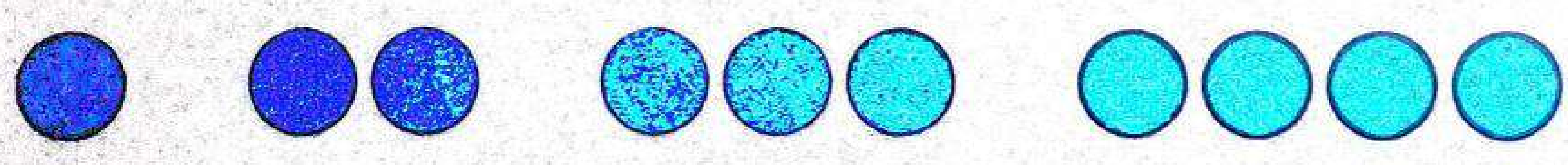
2 3 4 5



1 3 5 7

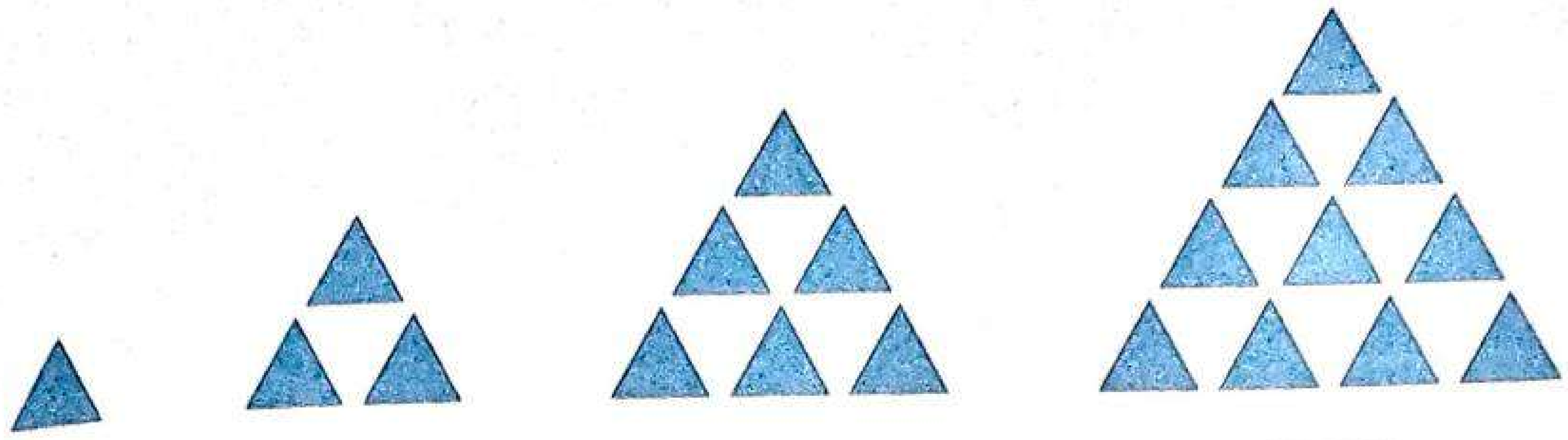
## Practice

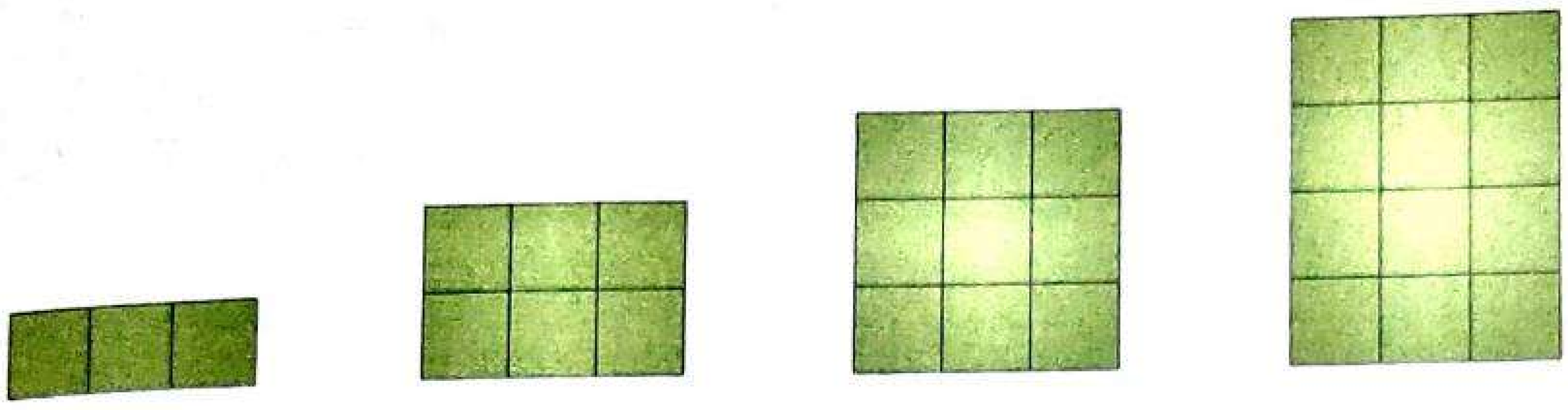
**Draw what might come next in the pattern.**
**Write the number of items in each step.**

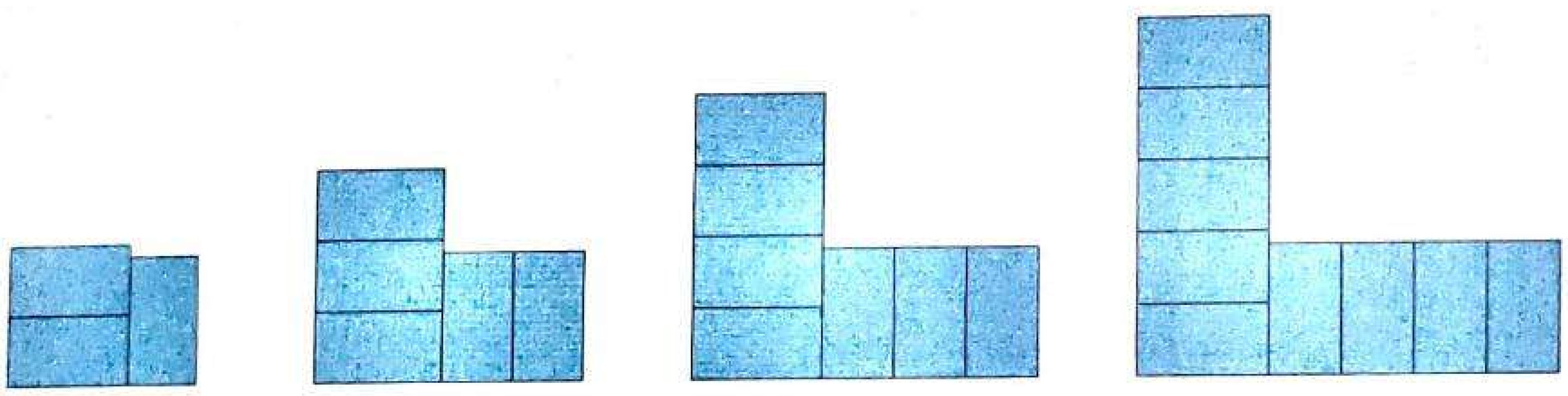


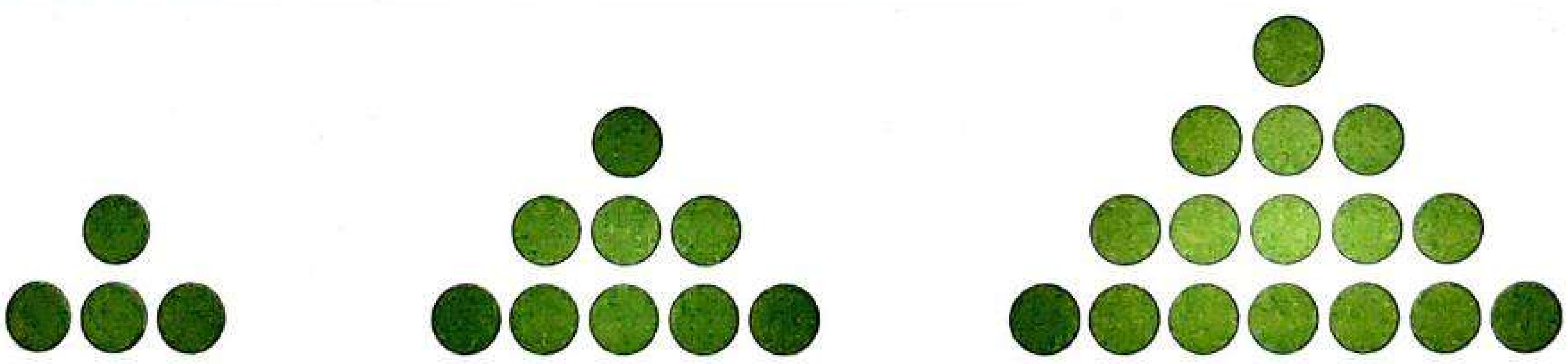


- Help your child to build a pattern using small objects such as : dry pasta.









## Draw your own pattern

Place a smiley face



- Help your child to discover the last pattern in this page.

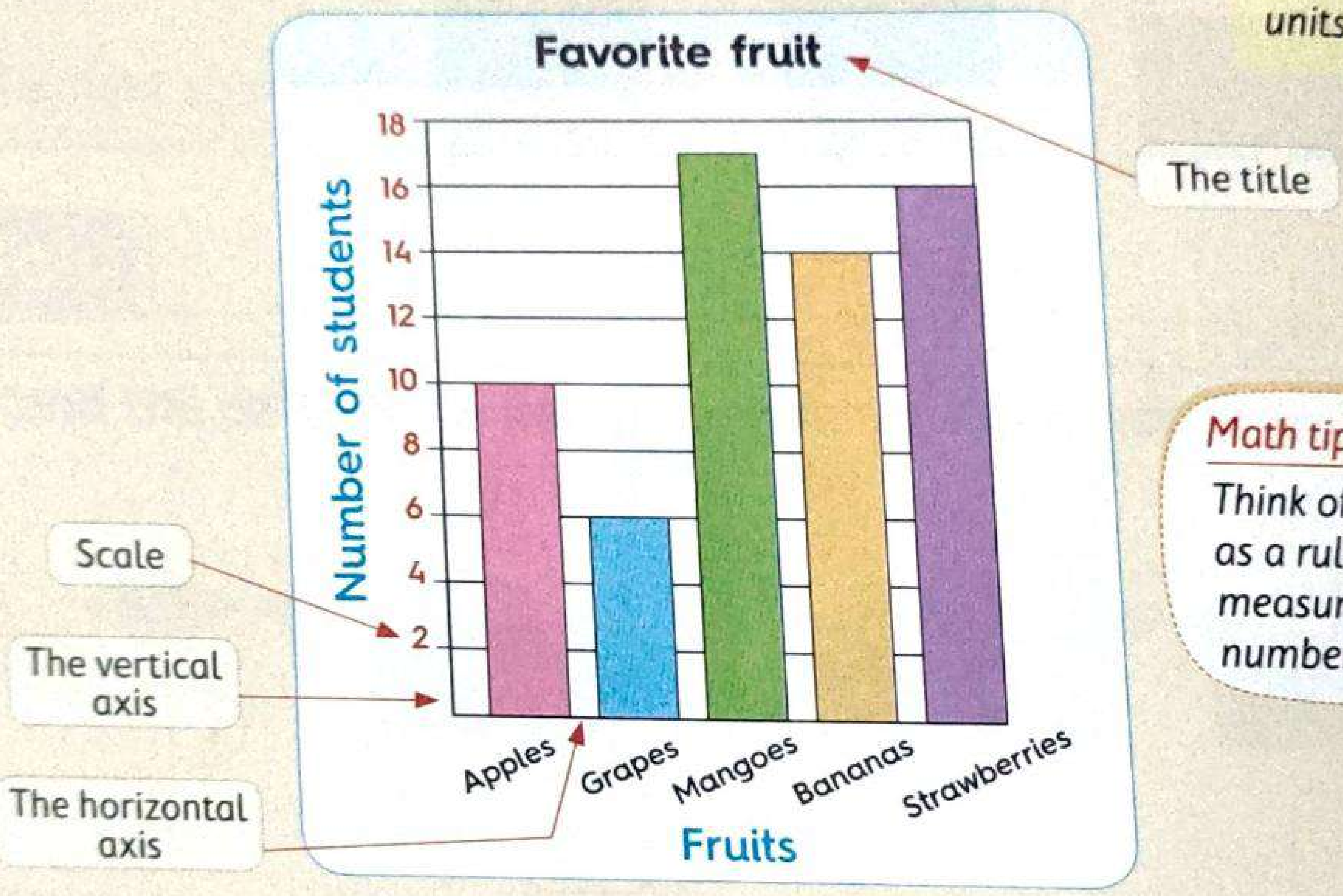
Hint : The base of the next figure increases 2 dots, then each row above the base decreases 2 dots than the previous

# Lesson 2

# Tally marks

## Remember Reading bar graph

- Some students voted for their favorite fruit.
- The results are shown on this **bar graph**.




*Vocabulary*

*Bar graph*
*A graph that uses bars t*
*show data.*

*Scale*
*The numbers that show*
*units used on a bar gra*

*Math tip*
*Think of each bar as a ruler that measures the number of votes.*



- A bar graph is a way to help you to compare data.
- Bar graphs use bars to show data. In this graph each kind of fruit has its own
- You can find the kind of fruit that has a certain votes by looking at the **scale**. example, to find the fruit that has 14 votes, find the number 14 on the scale find the bar that ends at 14. The kind of fruit that has 14 votes is bananas.

## Check

**Use the previous bar graph to answer each question.**

**1.** Which kind of fruit has the fewest votes ? ____________

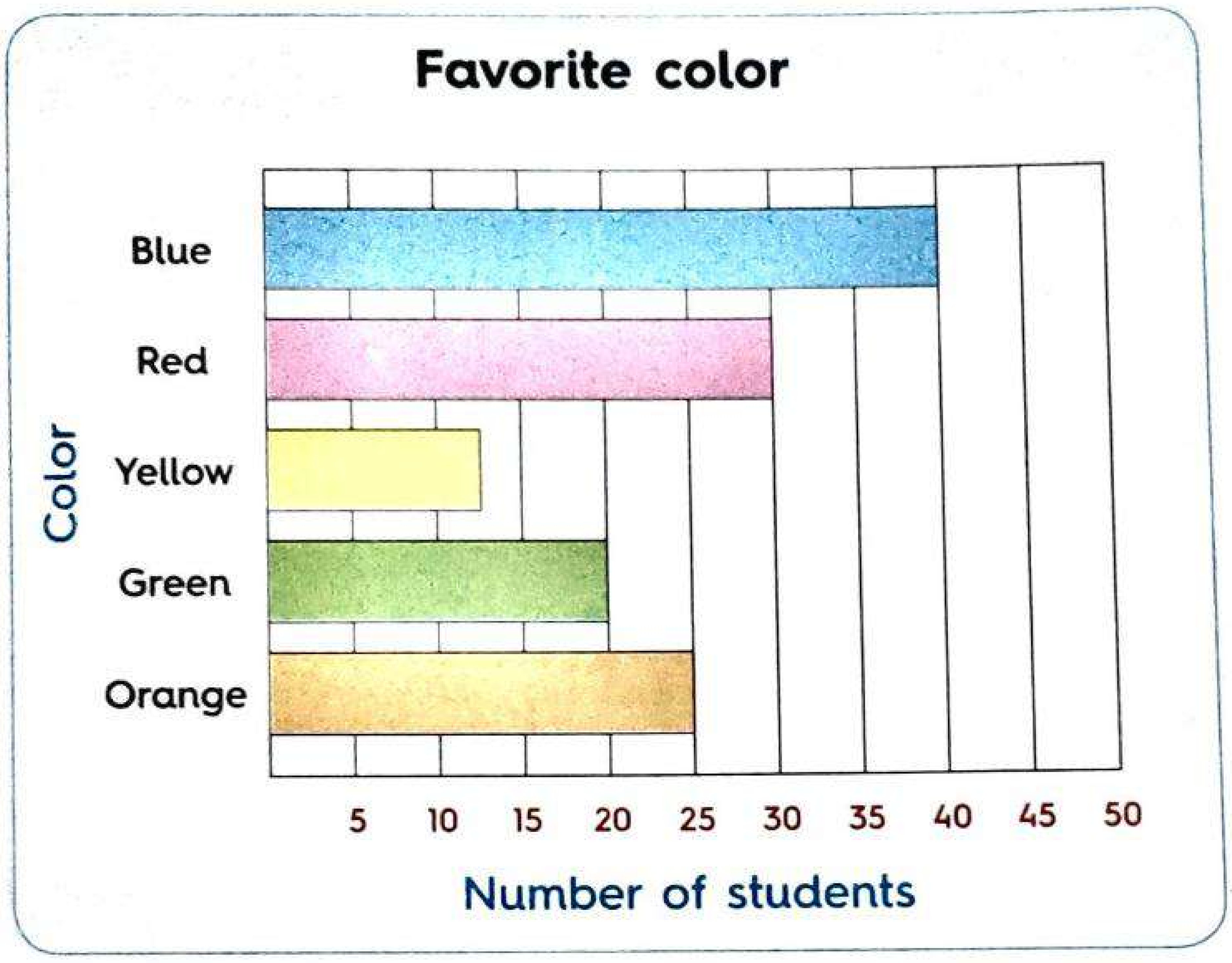
**2.** Which kind of fruit has 17 votes ? ____________

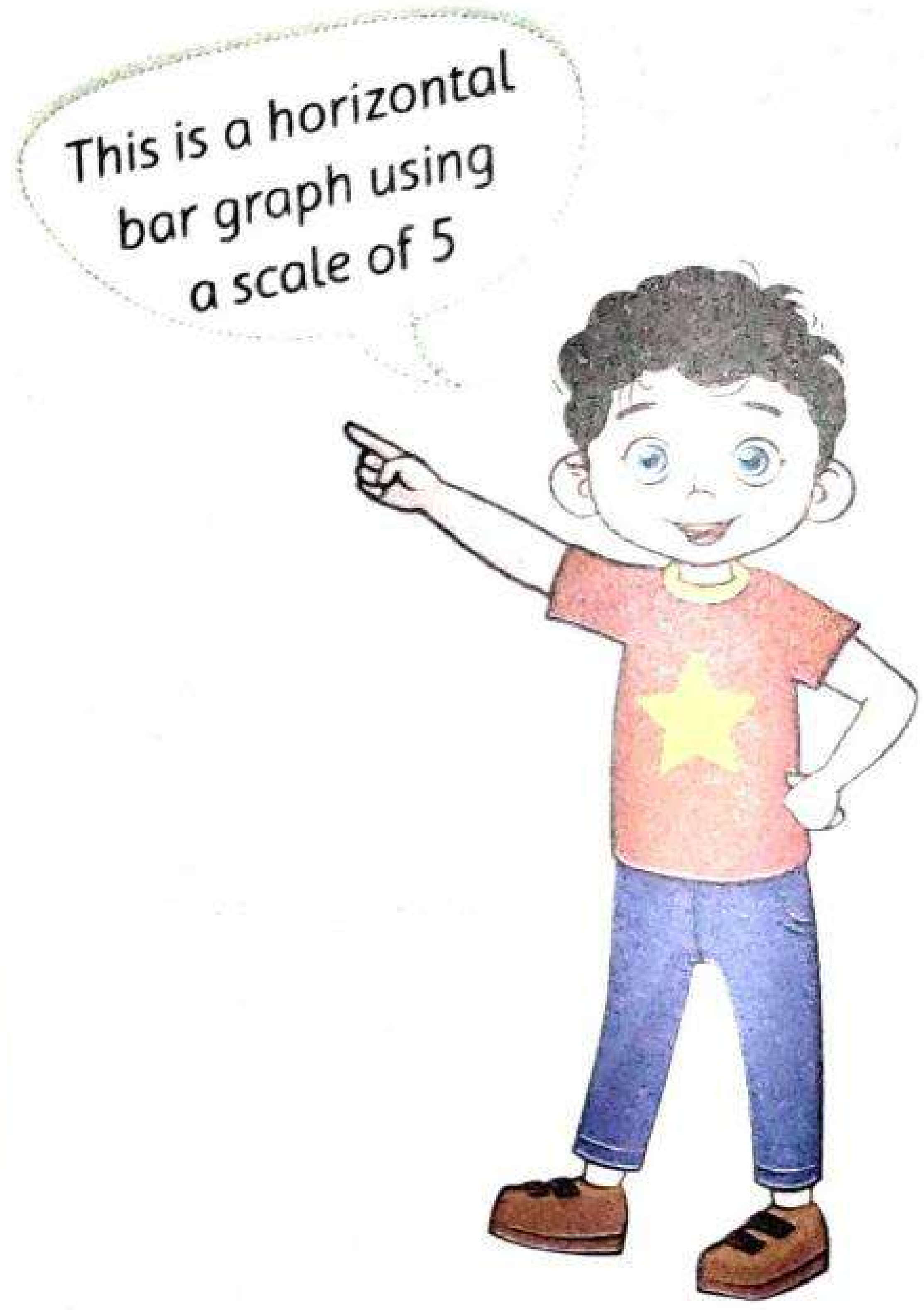
**Notes for parents**

- Help your child to remember how to read a bar graph. Talk with your child how to choose t bar graph.

## Practice

A student took a survey about the favorite color of some students. He used the results of the survey to make this bar graph.
**Use the bar graph to answer each question.**




**1.** Which color has the most votes ? ____________

**2.** Which color did 20 students vote for ? ____________

**3.** How many more students voted for red than green ? ____________

## Challenge

- From the previous bar graph, how many students did vote for yellow ?

____________

• Ask your child to read the bar graph on this page and list the colors in order from the most votes to the least votes.

## Learn Tally marks

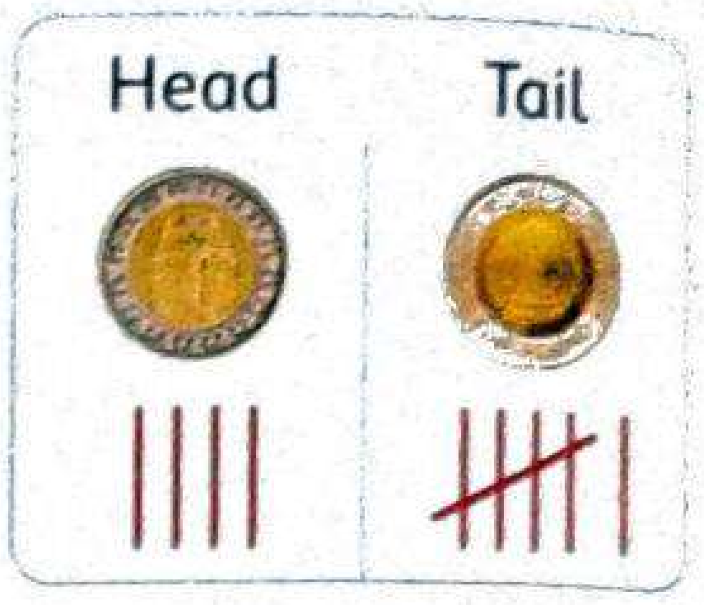
Vocabulary

**Tally mark**
a mark is used to reco... votes or other items.

- Bassem tossed a coin **10** times.

His friend Marwan showed his results with **tally marks.**




It was head 4 times.

It was tail 6 times.

- You can use tally marks to help count and organize data.

**Remember**

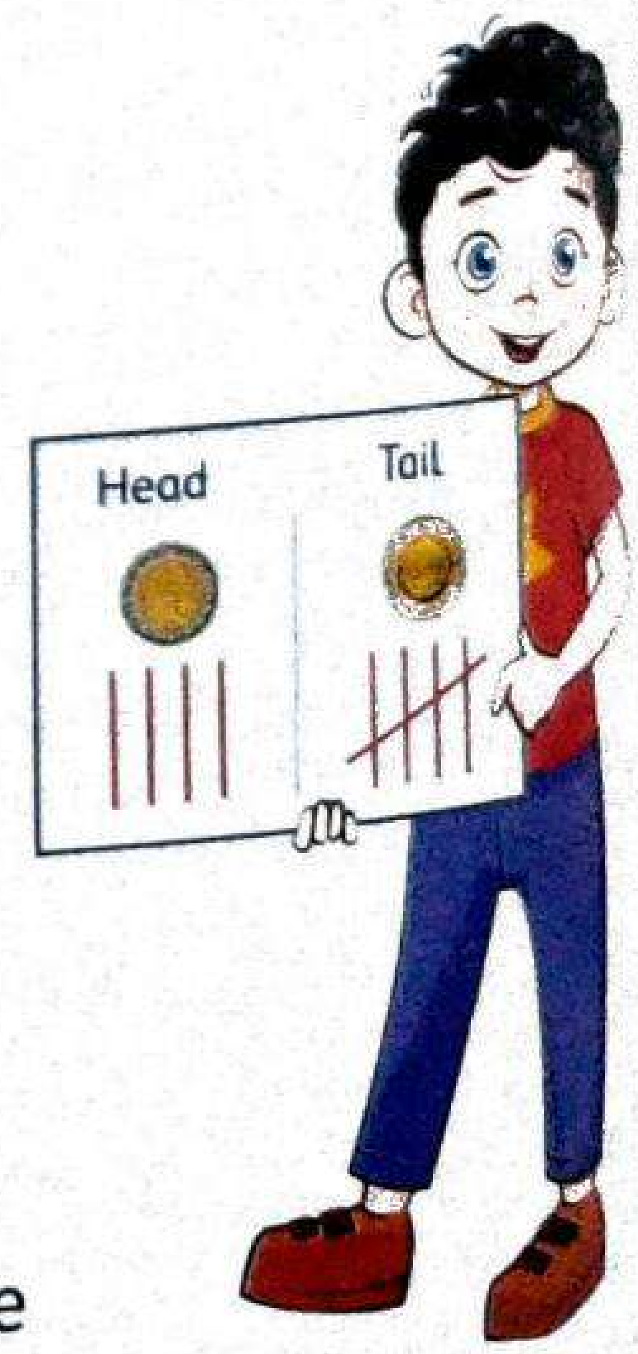
| means 1

𝍸 means 5

## Check

**1.** Toss a counter 25 times. Use a tally to mark head or tail.

| Head | Tail |
|---|---|
| | |




**2.** Circle what has more. head tail

**3.** How many more head or tail did you toss ? ............ more

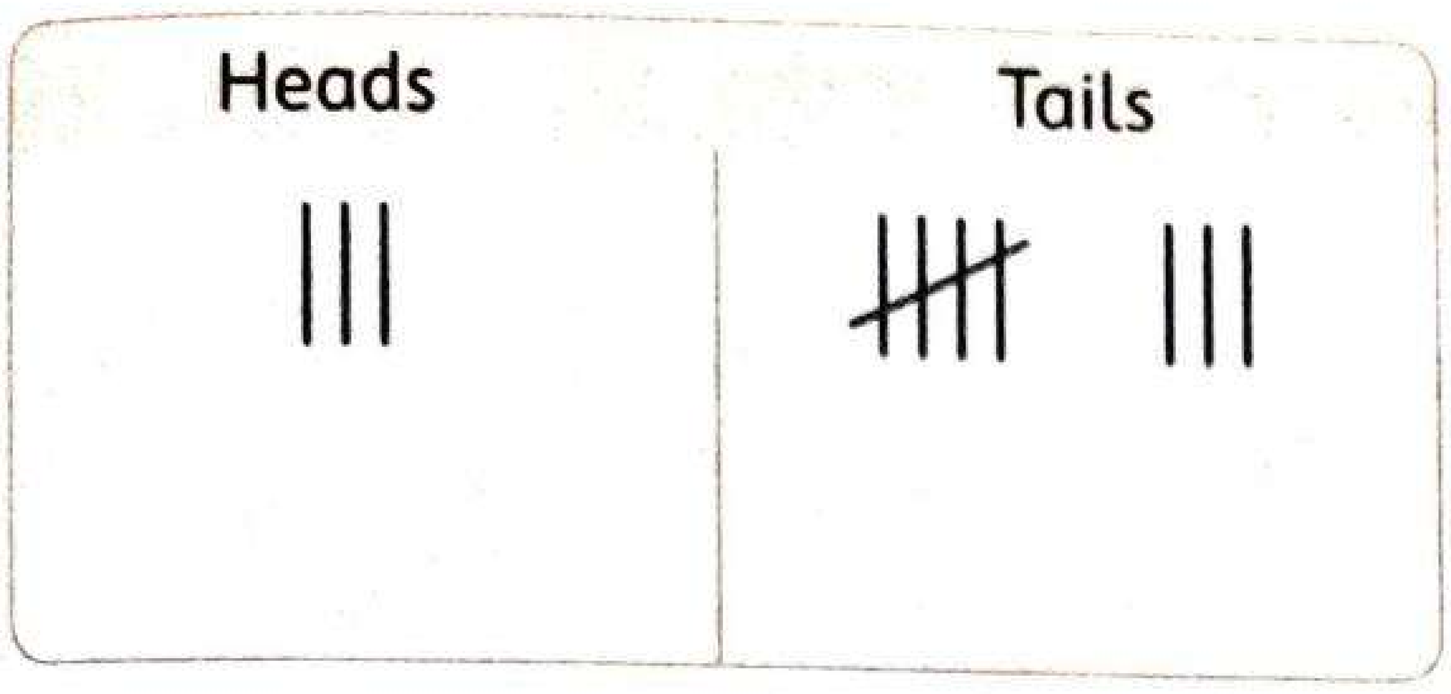
**Notes for parents**

- Ask your child to show a certain number using tallies.

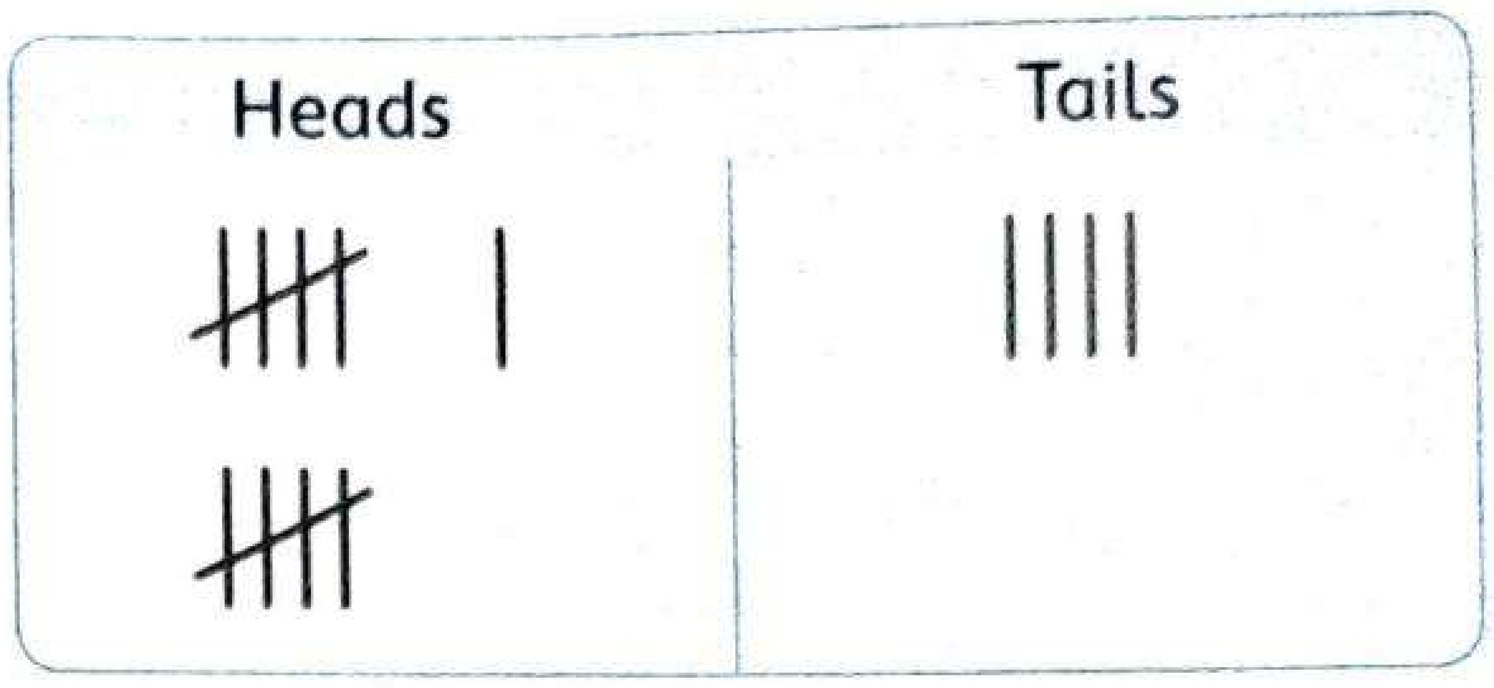
## Practice

Here are some other tallies.

**Count how many heads, how many tails, and how many in all.**




- How many heads ? ________
- How many tails ? ________
- How many in all ? ________




- How many heads ? ________
- How many tails ? ________
- How many in all ? ________

**Show the tallies for each chart.**

| Heads | Tails |
|---|---|
| | |

- Show 7 heads.
- Show 13 tails.
- How many in all ? ________

| Heads | Tails |
|---|---|
| | |

- Show 12 heads.
- Show 18 tails.
- How many in all ? ________

## Critical thinking

- If you toss a coin 10 times, could it land on head 10 times ? ________
- Why or why not ? ________

• Ask your child to use tally marks to count the number of girls and the number of boys in his/her family.

## Learn Organizing data using tally table

> Vocabulary
> Tally table
> a table uses tally ...
> to record data.

- A **tally table** is a useful way to represent survey results.
- Results are organized in easy way to read rows and columns.

> **Think**
> *It is better to record votes by using tally table than record it by writing its name.*

I took a survey to find out the favorite times of day to my friends.
Then i organized the results in a tally table.



| | |
|---|---|
| Morning | Night time |
| Evening | Lunchtime |
| Afternoon | Afternoon |
| Afternoon | Afternoon |
| Evening | Morning |
| Afternoon | Lunchtime |
| Lunchtime | Morning |
| Morning | Afternoon |
| Evening | Night time |
| Afternoon | Afternoon |

**Our favourite times of day**

| Time of Day | Tally | Numbe |
|---|---|---|
| Morning | \|\|\|\| | 4 |
| Lunchtime | \|\|\| | 3 |
| Afternoon | 卌 \|\|\| | 8 |
| Evening | \|\|\| | 3 |
| Night time | \|\| | 2 |

## Check

**Complete the tally table. Then answer.**

- What is the number of cows in the farm ? ..........
- Which animal has the greatest number ? ..........
- Which animal has the least number ? ..........
- How many animals are there in the farm ? ..........

**Animals in the farm**

| Animal | Tally | Numb |
|---|---|---|
| Horse | \|\| | ..... |
| Cow | 卌 | ..... |
| Buffalo | 卌 \|\|\| | ..... |
| Donkey | \|\|\| | ..... |

**Notes for parents**

- Ask your child to survey another favorite such as favorite animals and organize his/her data using table.

## Practice

Hany made this list of the shirt colors his friends were wearing.
Make a tally table. **Then answer.**

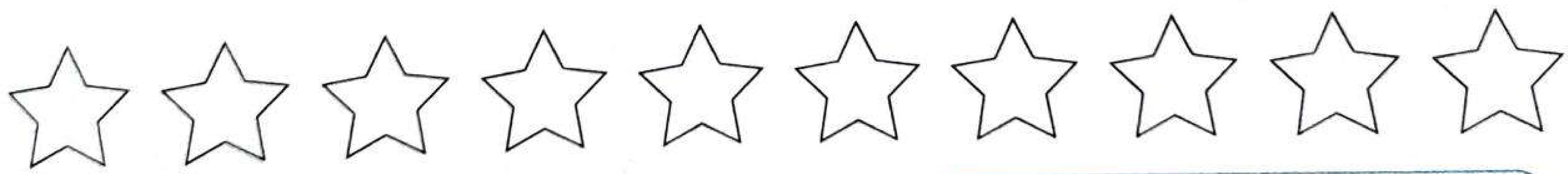
| Shirt color | | | |
|---|---|---|---|
| Blue | Red | Blue | Green |
| Green | Green | Blue | Red |
| Blue | Blue | Red | Blue |
| Red | Red | Blue | Red |
| Blue | Blue | Blue | Red |

- How many children were wearing blue shirts ? ______
- What was the color of the most shirt ? ______
- List the shirt color data from the least to the greatest : ______ , ______ , ______

**Shirt color**

| Color | Tally | Number |
|---|---|---|
| ___ | | ___ |
| ___ | | ___ |
| ___ | | ___ |

**Color all the stars. Color some red, some green and some blue.**
Make a tally table to count the stars.





**Star color**

| Color | Tally | Number |
|---|---|---|
| Red | | ___ |
| Green | | ___ |
| Blue | | ___ |

- Ask your child to make a tally table to count some things at home, such as mugs, books or spoons.

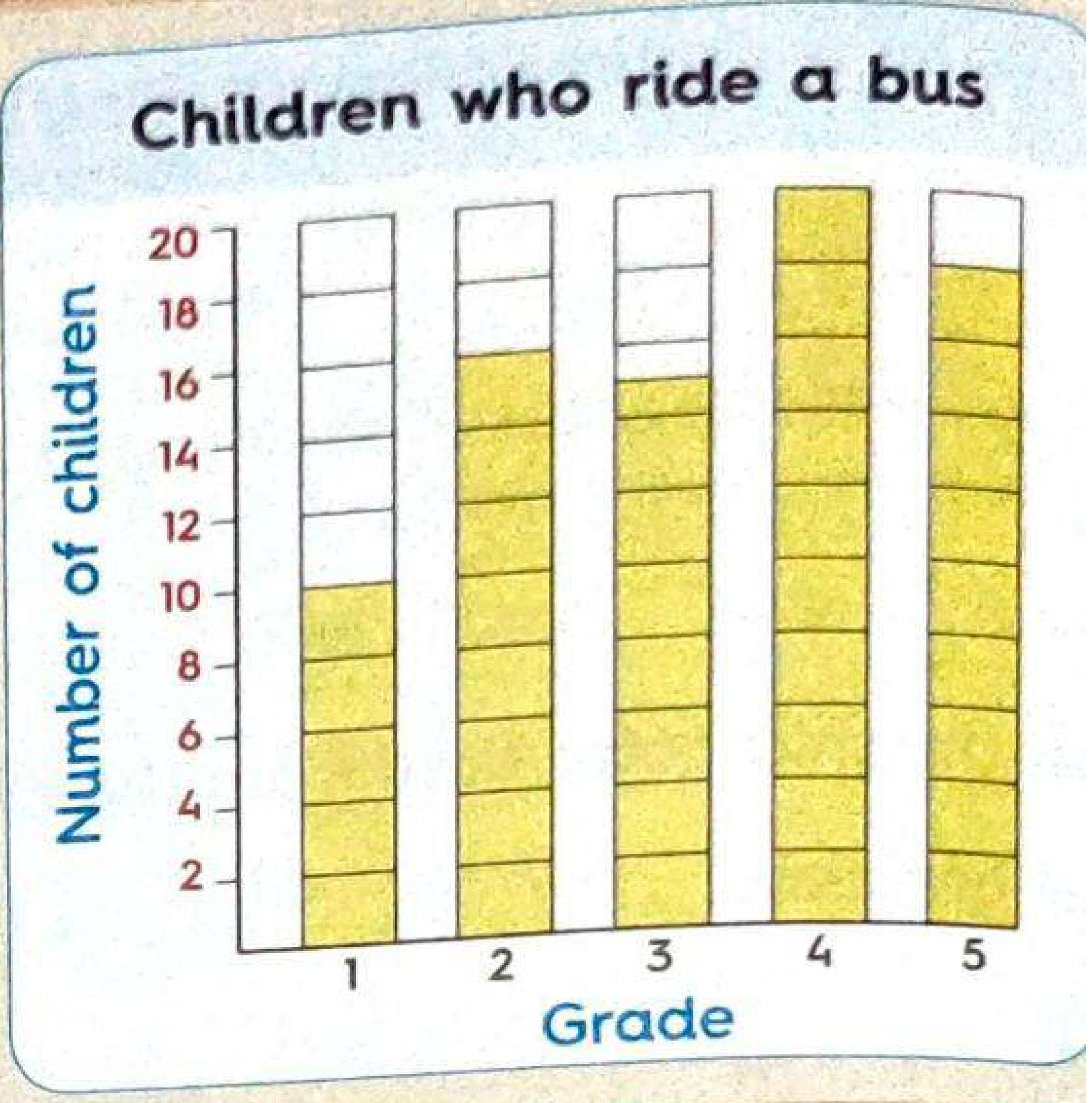
# Learn Tally table and bar graph



I took a survey to find out how many children ride the bus to school. Then I made a bar graph.

**Do you ride a bus to school**

| Grade | Number of children |
|---|---|
| 1 | 𝍸 𝍸 |
| 2 | 𝍸 𝍸 𝍸 \| |
| 3 | 𝍸 𝍸 𝍸 |
| 4 | 𝍸 𝍸 𝍸 𝍸 |
| 5 | 𝍸 𝍸 𝍸 \|\|\| |



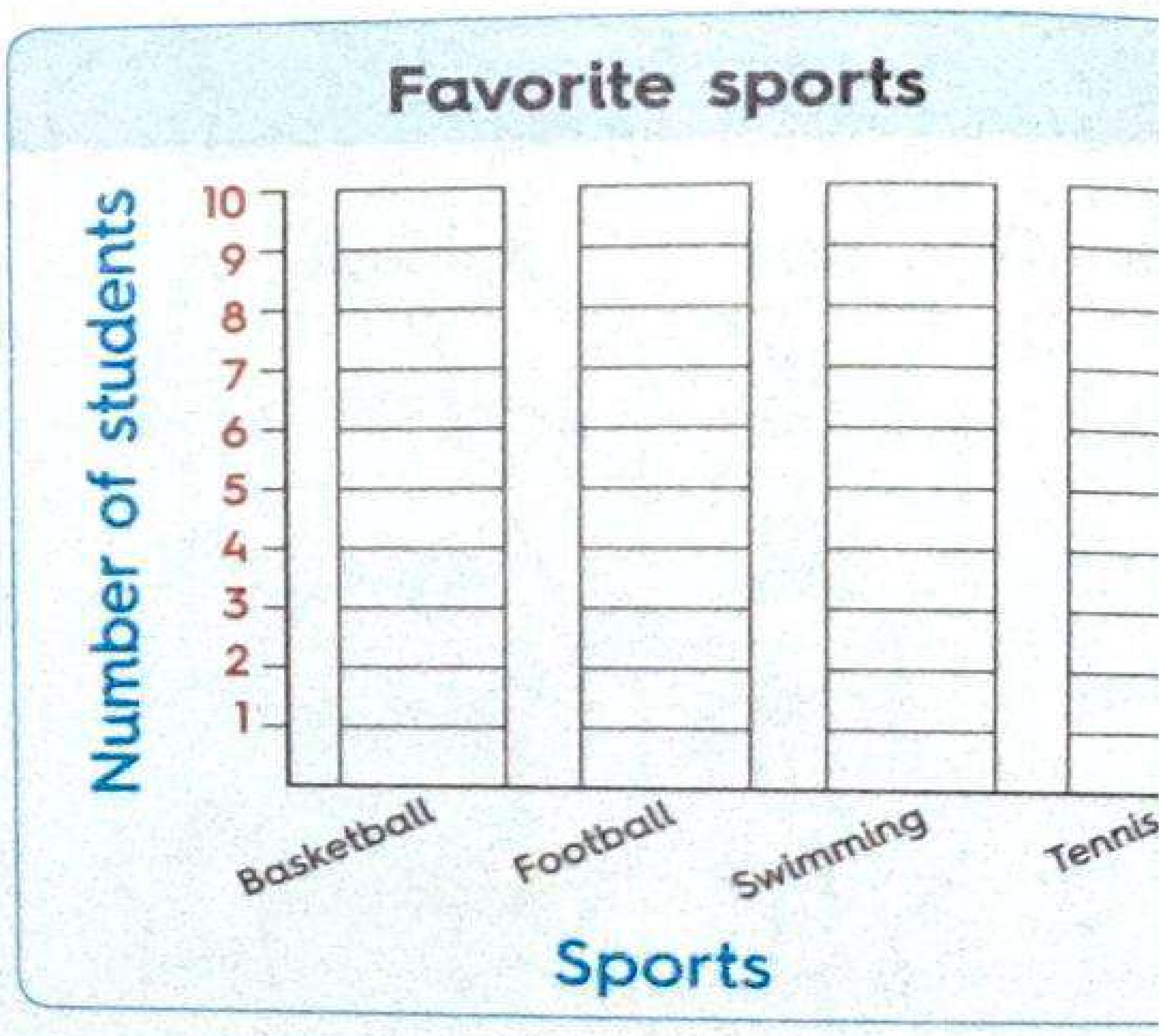

How many children in grade 4 ride the bus to school? 20

# Check

Count the tallies. Write the total. Color the graph to show the data.

**Favorite sports**

| Sports | Number of students | Number |
|---|---|---|
| Basketball | \|\|\|\| | |
| Football | 𝍸 \|\|\| | |
| Swimming | 𝍸 \| | |
| Tennis | \|\|\| | |






• Ask your child to add his/her vote to the graph about the subject he likes.

## Practice

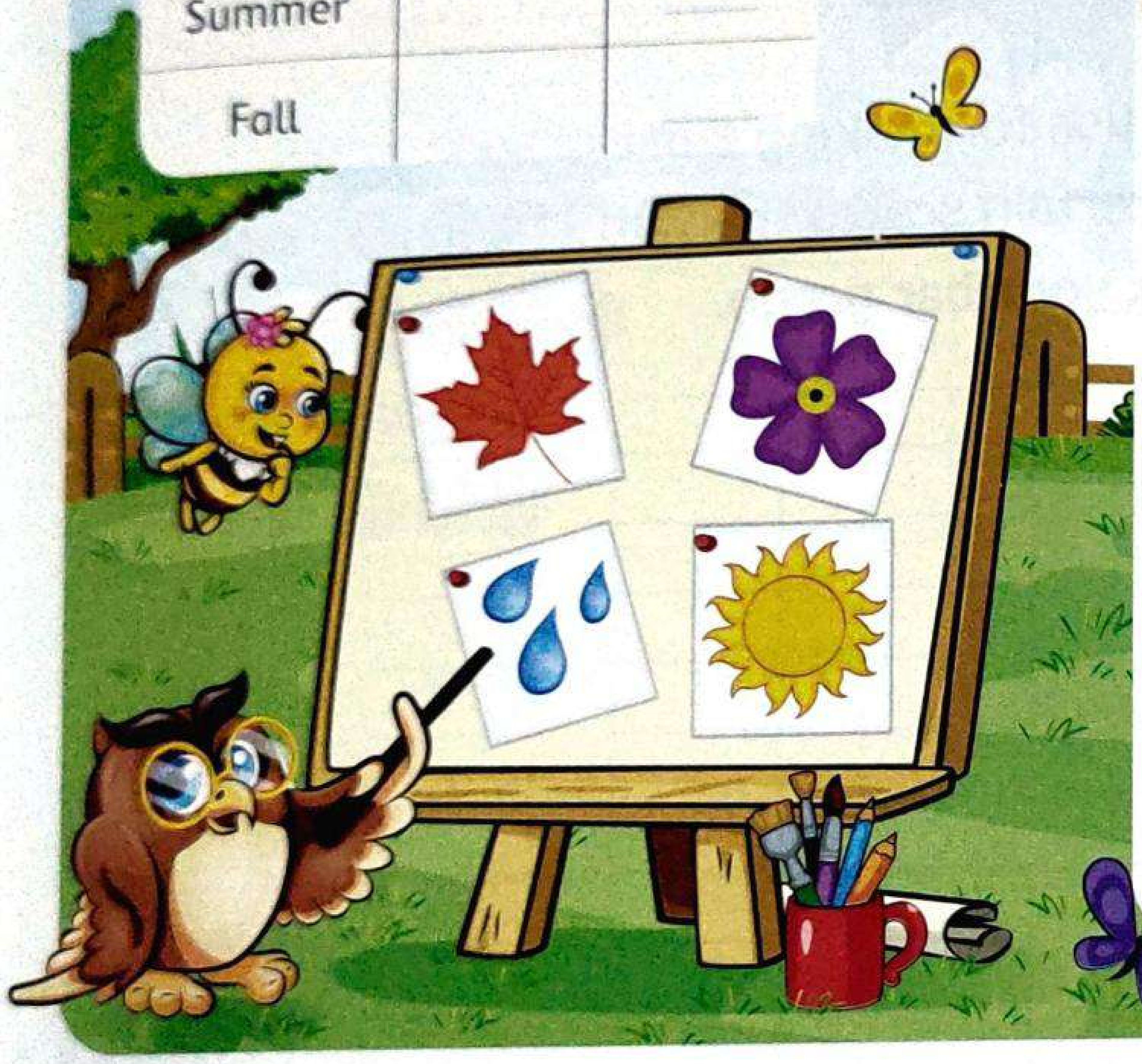
This is a survey about our favorite season in the class

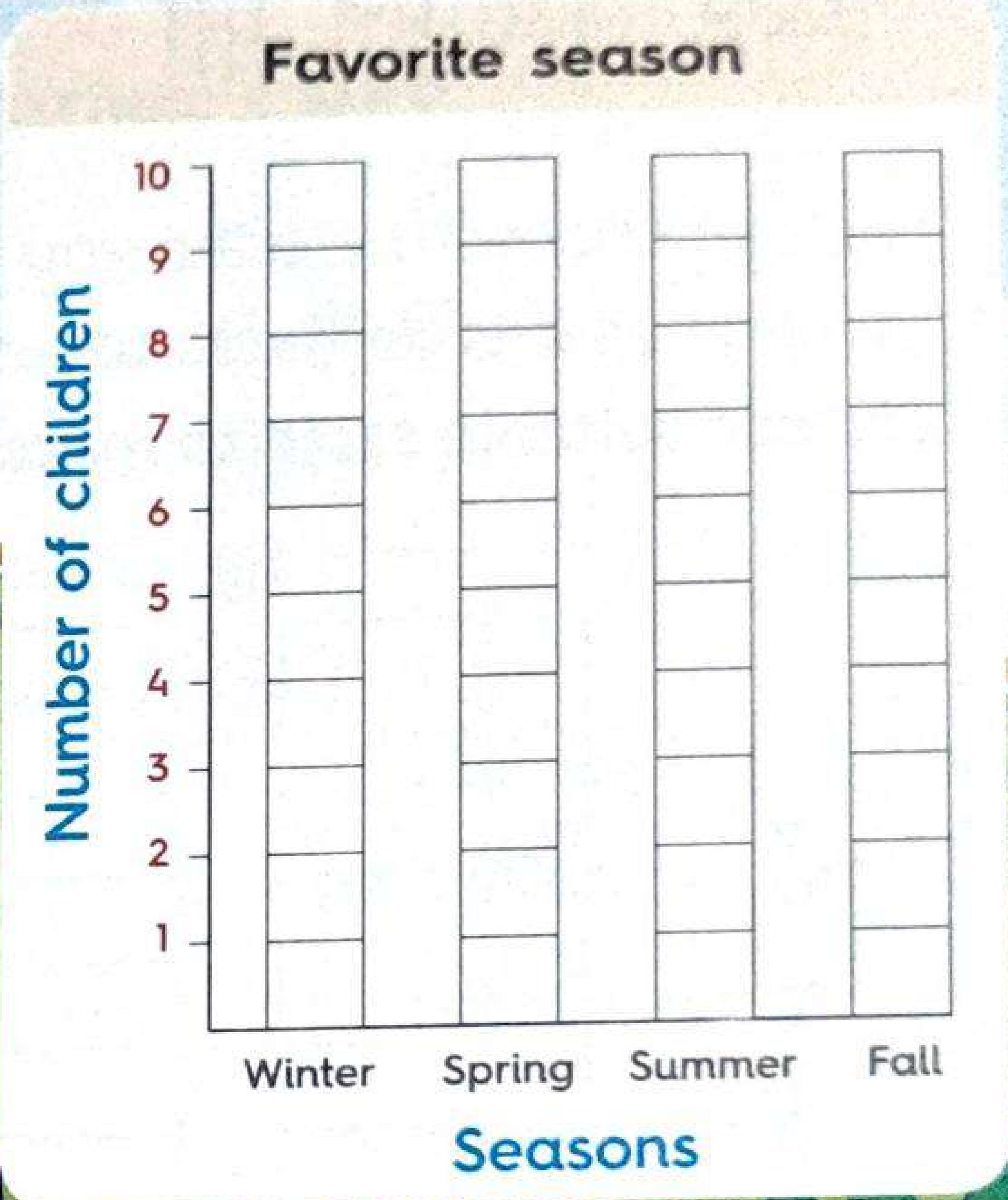
**Make a tally table and then use it to make a bar graph.**

| Summer | Winter | Summer | Fall |
|---|---|---|---|
| Fall | Winter | Winter | Summer |
| Fall | Summer | Summer | Fall |
| Winter | Fall | Summer | Spring |
| Spring | Summer | Fall | Summer |

**Our favorite season**

| Season | Tally | Number |
|---|---|---|
| Winter | | |
| Spring | | |
| Summer | | |
| Fall | | |






**Answer the questions.**

- Which season is favored by the most ? ____________

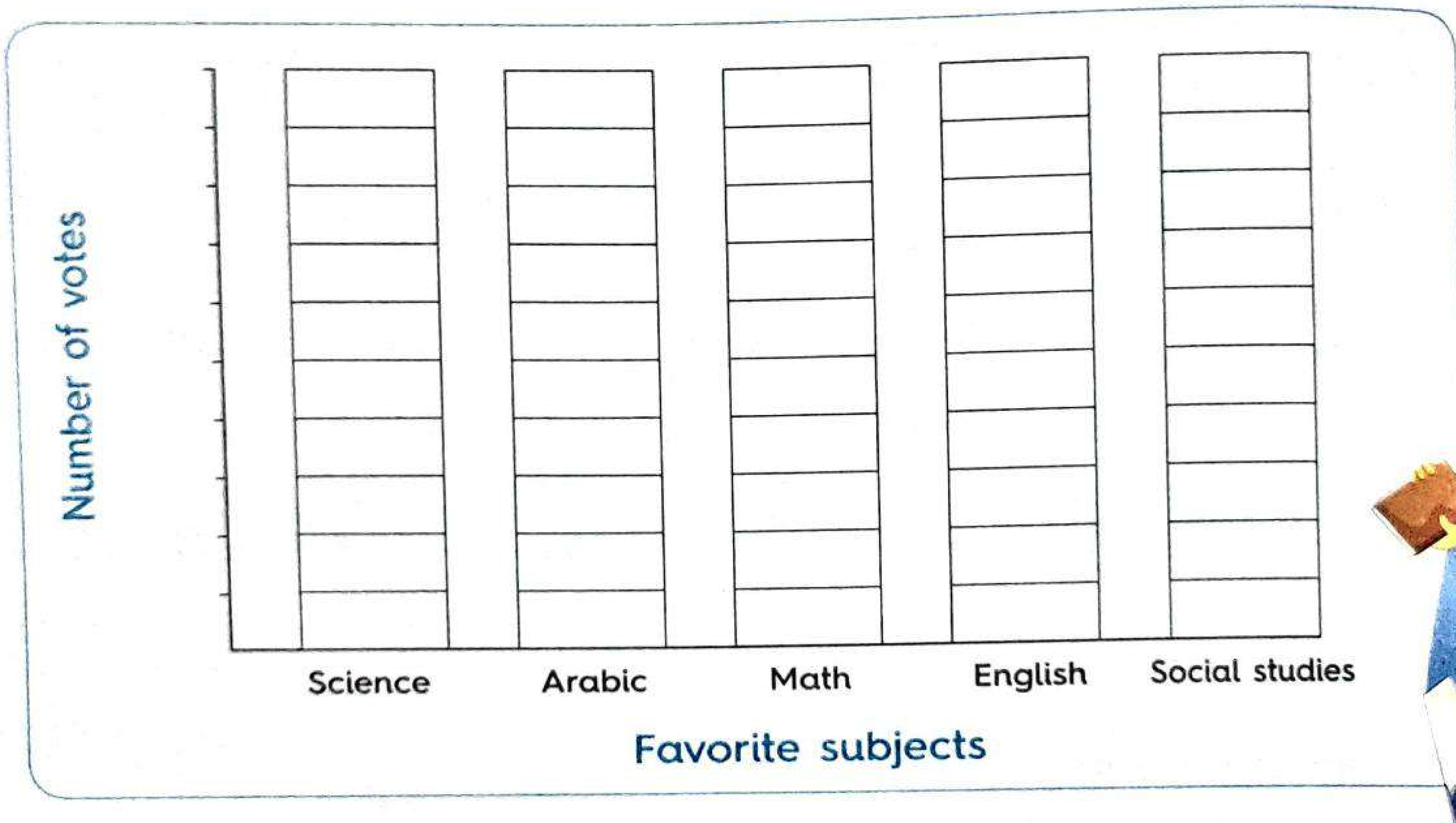
- Which season is favored by the least ? ____________

- How many students did vote in total ? ____________

This tally table shows students favorite subjects.
**Count the tallies. Write the numbers.**

| Favorite subject | | |
|---|---|---|
| **Subject** | **Tally** | **Number** |
| Science | 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 | ...... |
| Arabic | 𝍸 𝍸 | ...... |
| Math | 𝍸 𝍸 𝍸 𝍸 | ...... |
| English | 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 | ...... |
| Social studies | 𝍸 𝍸 | ...... |

- You can choose the scale you use for making a bar graph. Sometimes it is better to use certain scales than others.
  **Choose suitable scale to make your bar graph.**






## Challenge

- What would happen if you used 1 as your scale ? ..............................

**Notes for parents**

- Ask your child why he/she use this scale for the data above.

Place a smile face

Lesson **3**

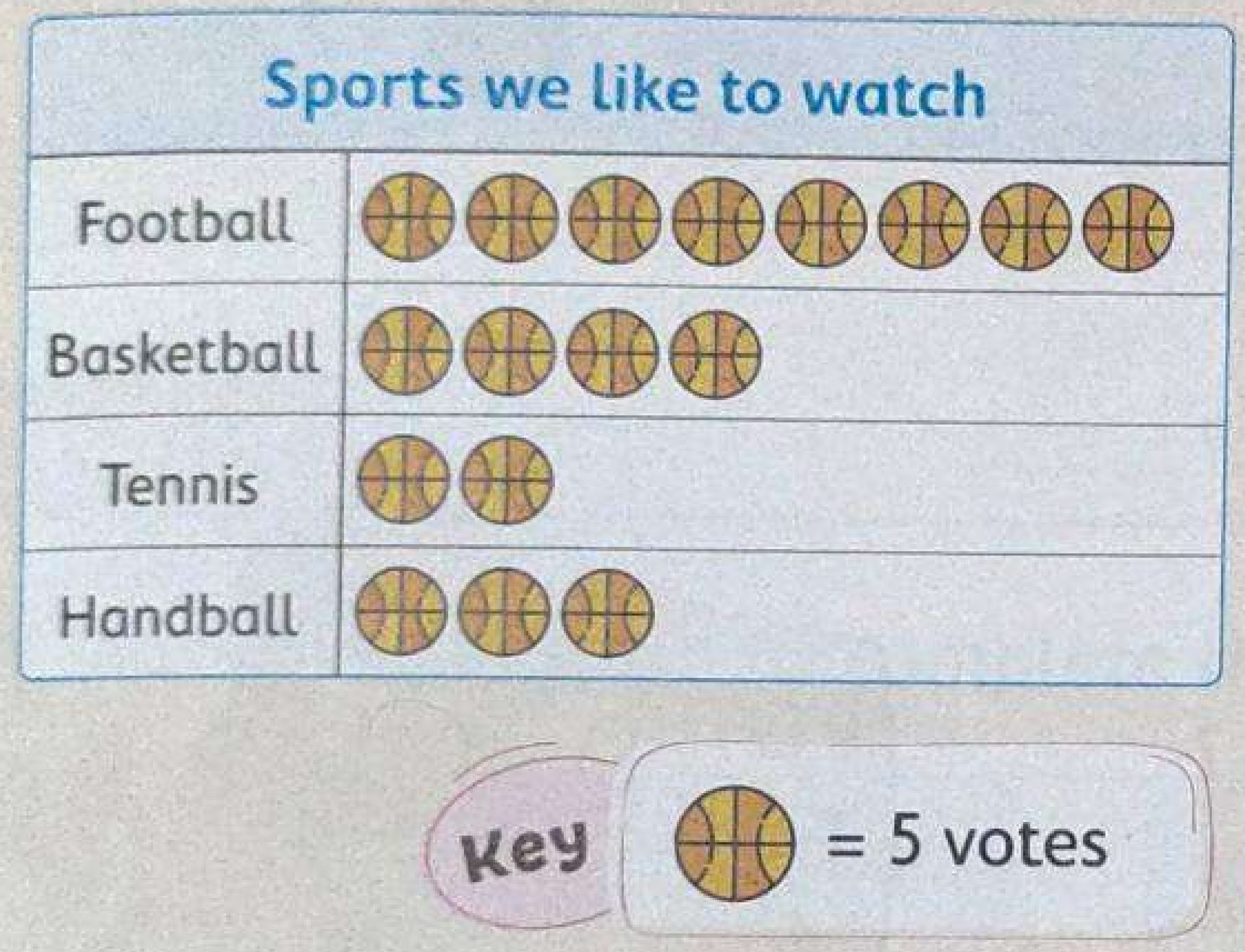
# Tally table and pictograph

## Remember — Pictographs

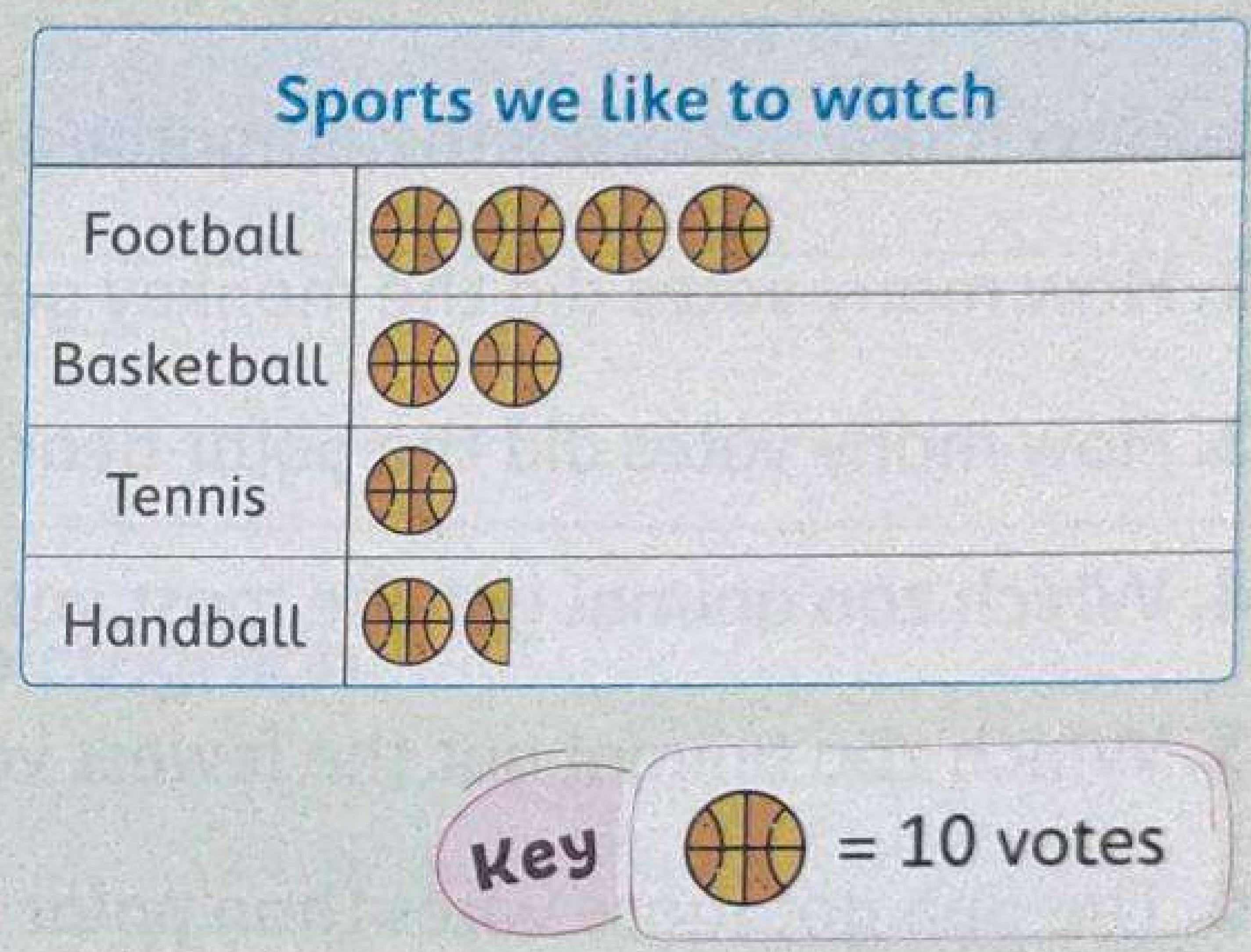
- A **Pictograph** is another way to show data.
  Symbols on a pictograph can show any number.
  The **Key** shows what each symbol means.
  Wael and Mariam each used a different key to show the same data.

> *Vocabulary*
> *Pictograph*
> *A graph that uses pictures to show data.*
> *Key*
> *The key tells how many each picture represents*

### Wael's Way




### Mariam's Way




## Check

**Use the previous pictographs to answer each question.**

- How many people liked basketball ? ____________
- How many people liked handball ? ____________
- Which sport is liked the most ? ____________
- Which sport is liked the least ? ____________

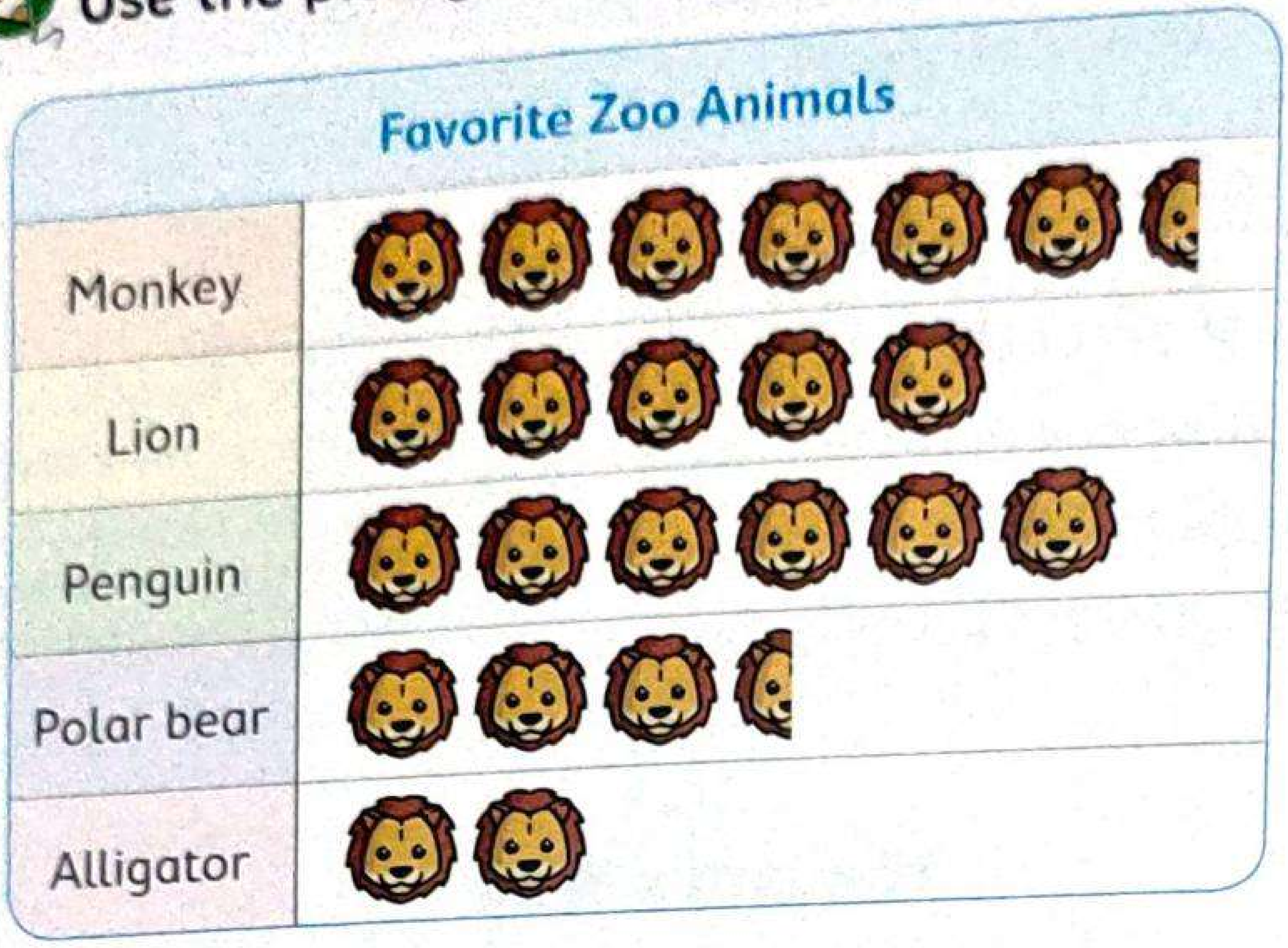
> *Math tip*
> *If a pictograph used a key of 10, then count each half of an image as 5*

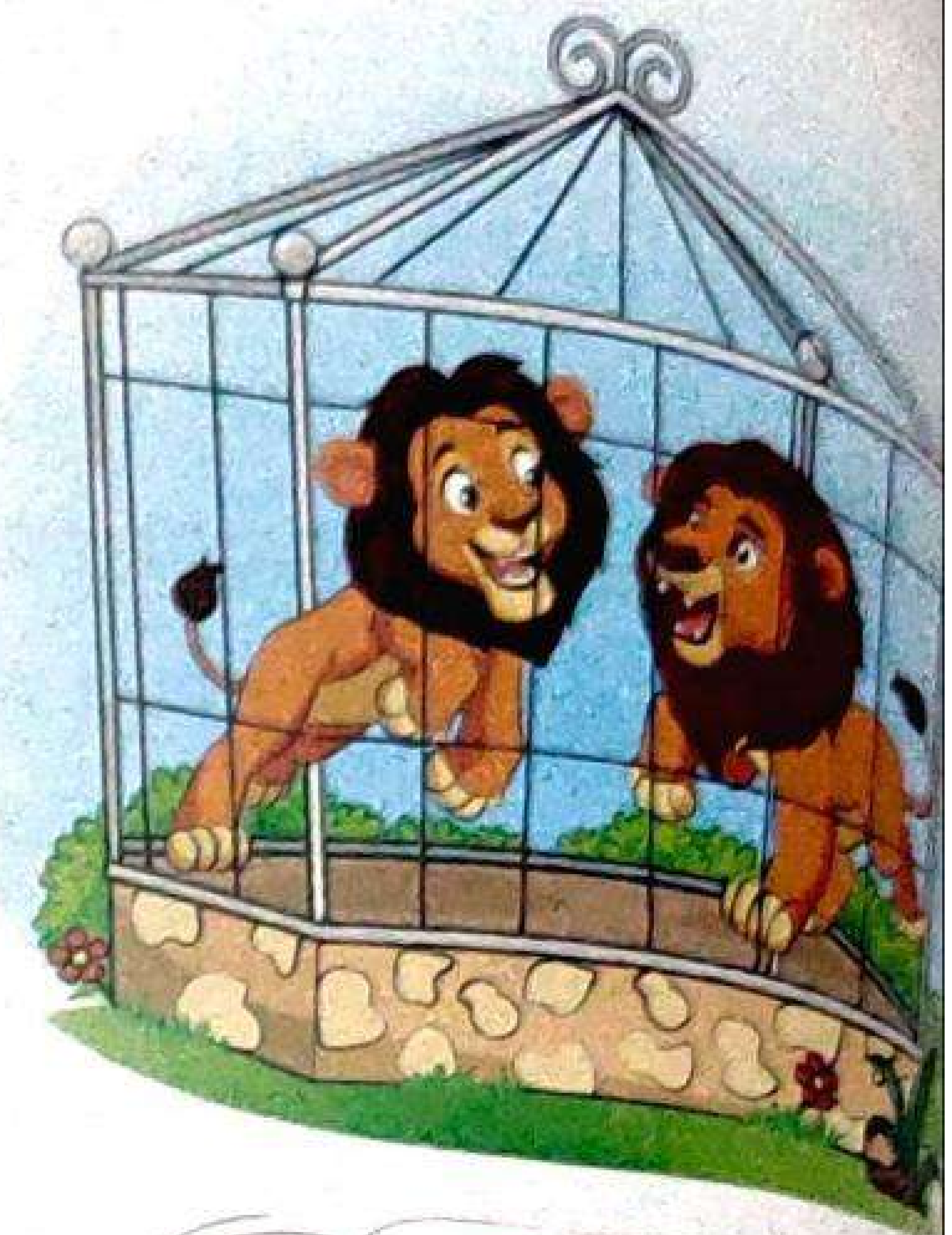


• Make sure that your child understand that the key tells how many each picture stands for.

## Practice

Use the pictograph to answer the question.



Key = 2 votes

1. How many votes did the alligator get ? ________
2. How many votes did the monkey get ? ________
3. How many votes did the polar bear get ? ________
4. Which zoo animal got the most votes ? ________
5. Which zoo animal got the fewest votes ? ________
6. The lion got more votes than polar bear.

   How many more votes did the lion get ?

   ______ ☐ ______ = ______




7. How many votes did the monkey and the alligator get in all ?

   ______ ☐ ______ = ______

## Challenge

- Suppose = 5 votes. How many symbols would there be for lion ? ________

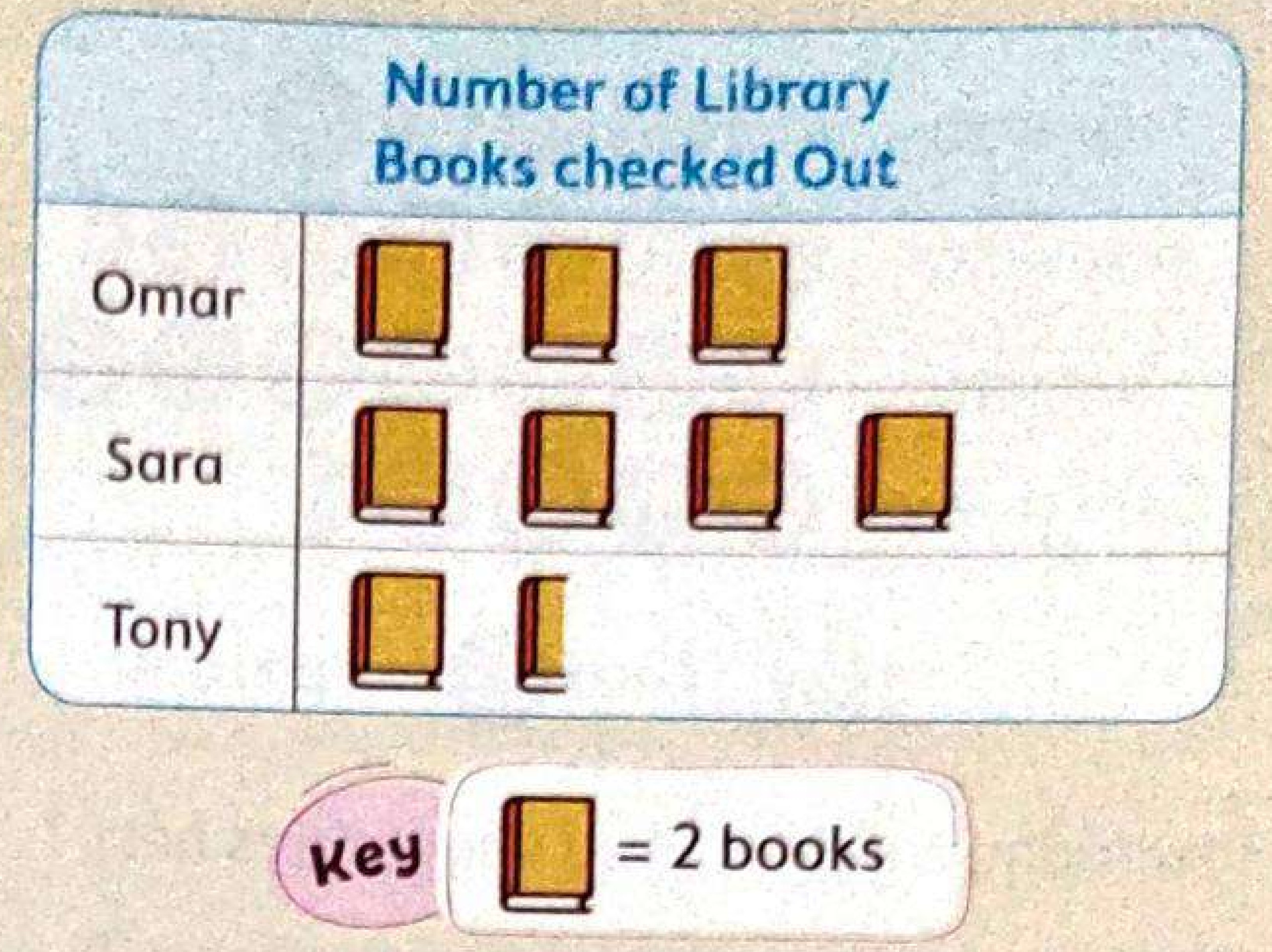
**Notes for parents**

- Help your child to use the pictograph to answer the questions and help him/her to solve the problem

## Learn Tally and pictograph

- A pictograph helps you compare information.

| Number of Library Books checked Out | |
|---|---|
| **Name** | **Tally** |
| Omar | 卌 I |
| Sara | 卌 III |
| Tony | III |

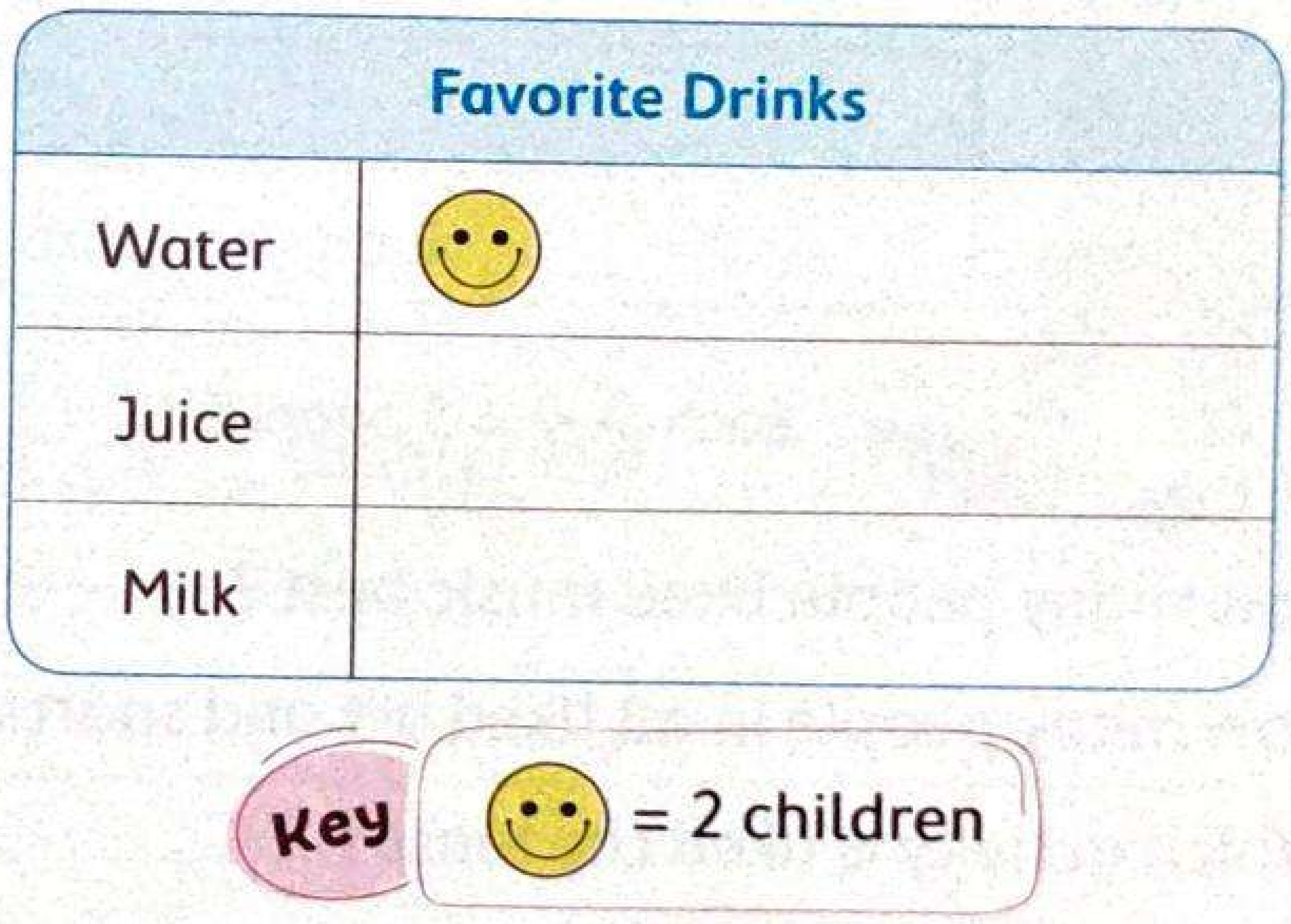



How many library books did Tony check out ? 3 books

## Check

Use the tally table to complete the pictograph.

| Favorite Drinks | |
|---|---|
| **Drink** | **Tally** |
| Water | 卌 I |
| Juice | 卌 卌 |
| Milk | 卌 II |

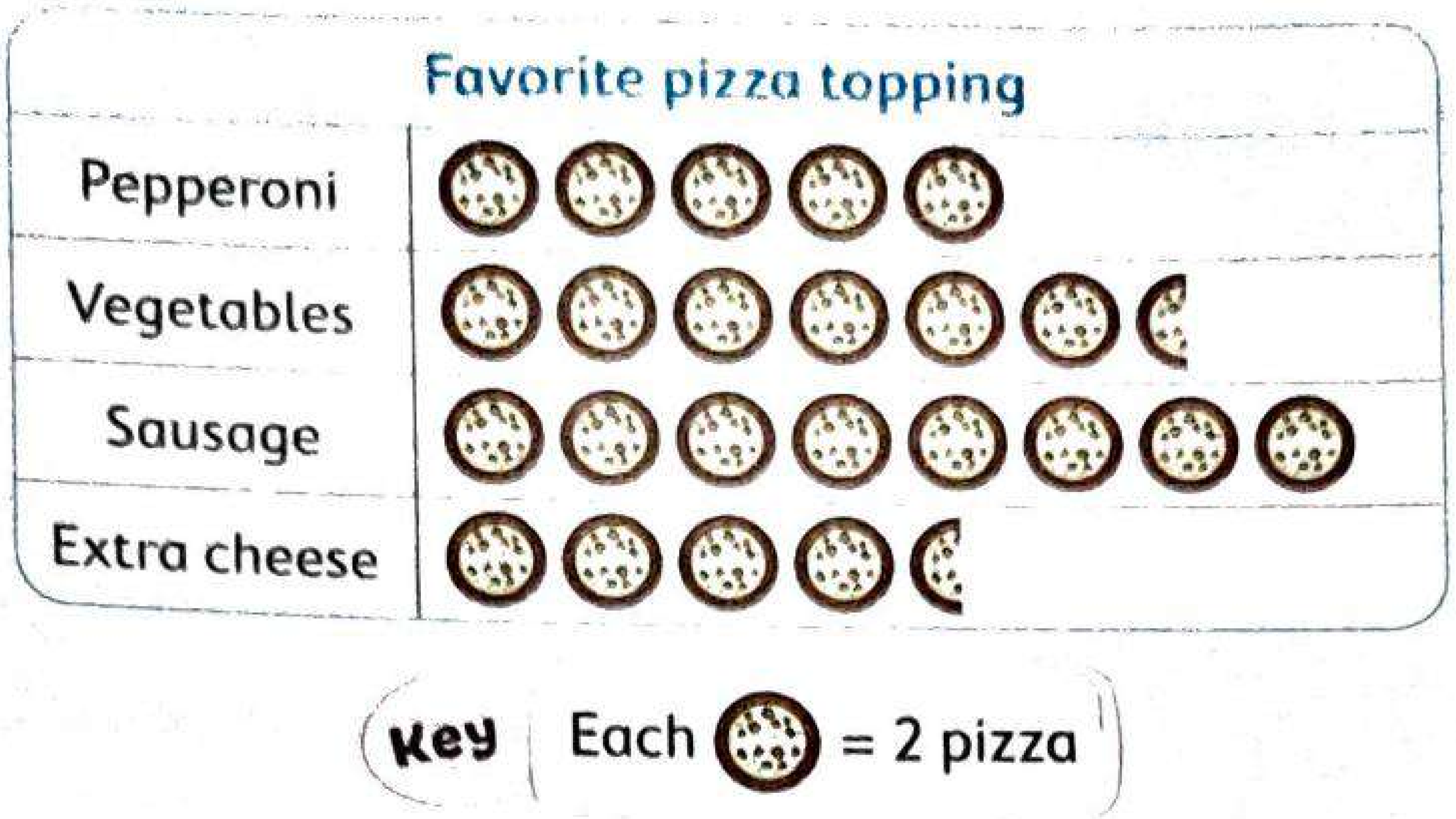



- Use the pictograph.
  - How many children chose milk ? ________ children
  - How many more children chose juice than water ? ________ more children

• Help your child to find the number of children using the tally table then help him/her to complete the pictograph and answer the questions.

## Practice

Use the key in pictograph to complete the tally table.




| Favorite pizza topping | |
|---|---|
| **Type** | **Tally** |
| Pepperoni | |
| Vegetables | |
| Sausage | |
| Extra cheese | |

- How many children liked vegetables best ? ______ children
- Which type of topping is liked the most ? ______
- How many more children liked pepperoni than extra cheese? ______ more children

Convert the same information from the tally table into a pictograph.

| Favorite activity | |
|---|---|
| Music | |
| Art | |
| Sports | |
| Reading | |

Key Each  = 5 people

| Favorite activity | |
|---|---|
| **Type** | **Tally** |
| Music | 𝍸 𝍸 𝍸 |
| Art | 𝍸 𝍸 |
| Sports | 𝍸 𝍸 𝍸 𝍸 |
| Reading | 𝍸 |

- How many people liked music best ? ______ people
- How many people in all liked art and sports activities ? ______ people
- Which activity is liked the least ? ______

## Challenge

- 5 more people are liked art. How many activity symbols  would you draw on the graph ? ________

**Notes for parents**

- Help your child to understand that pictographs are good graphs to use when showing large quantities of data.

Place a smile face

Lesson 4

# Line plots

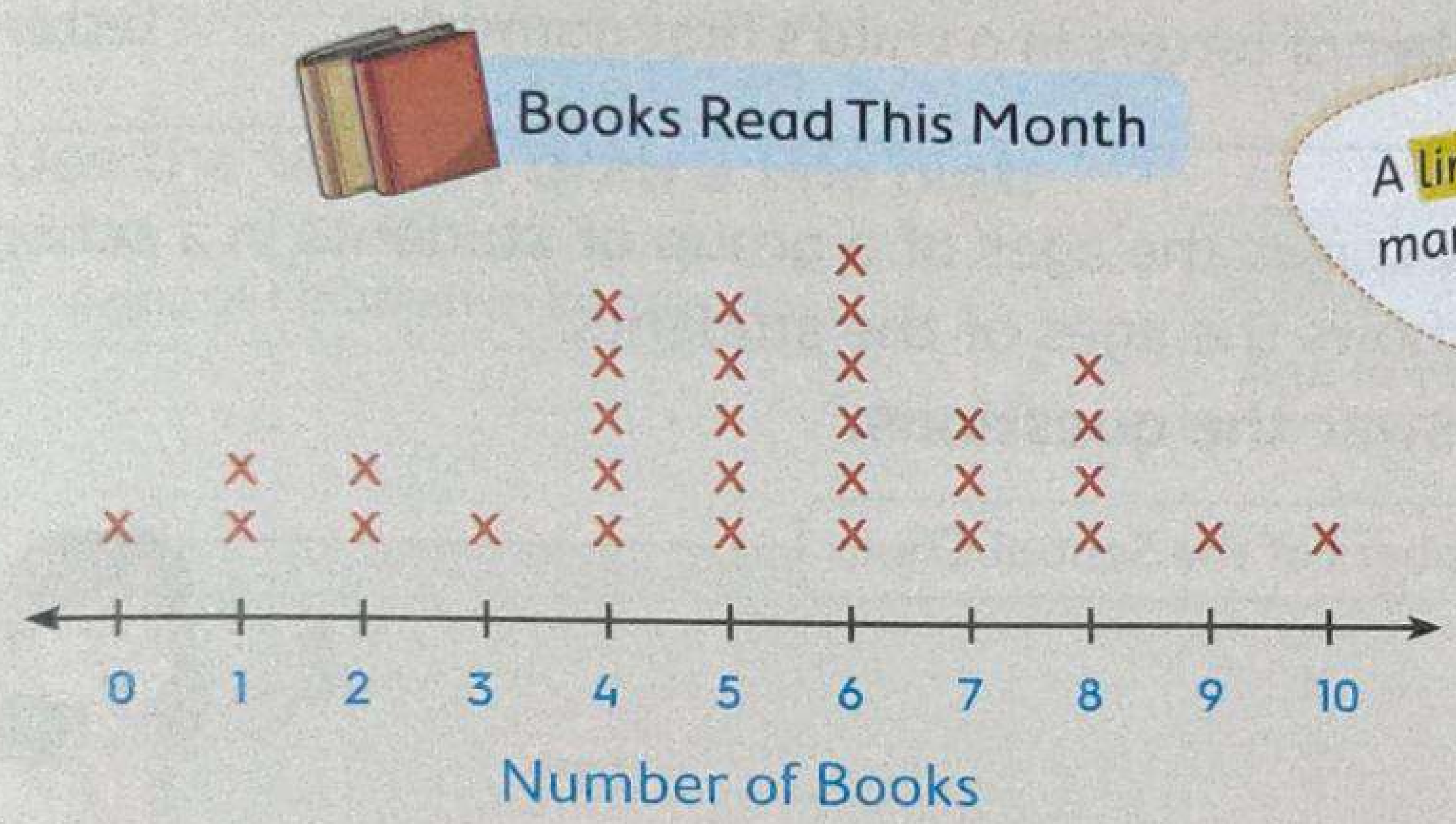
## Learn

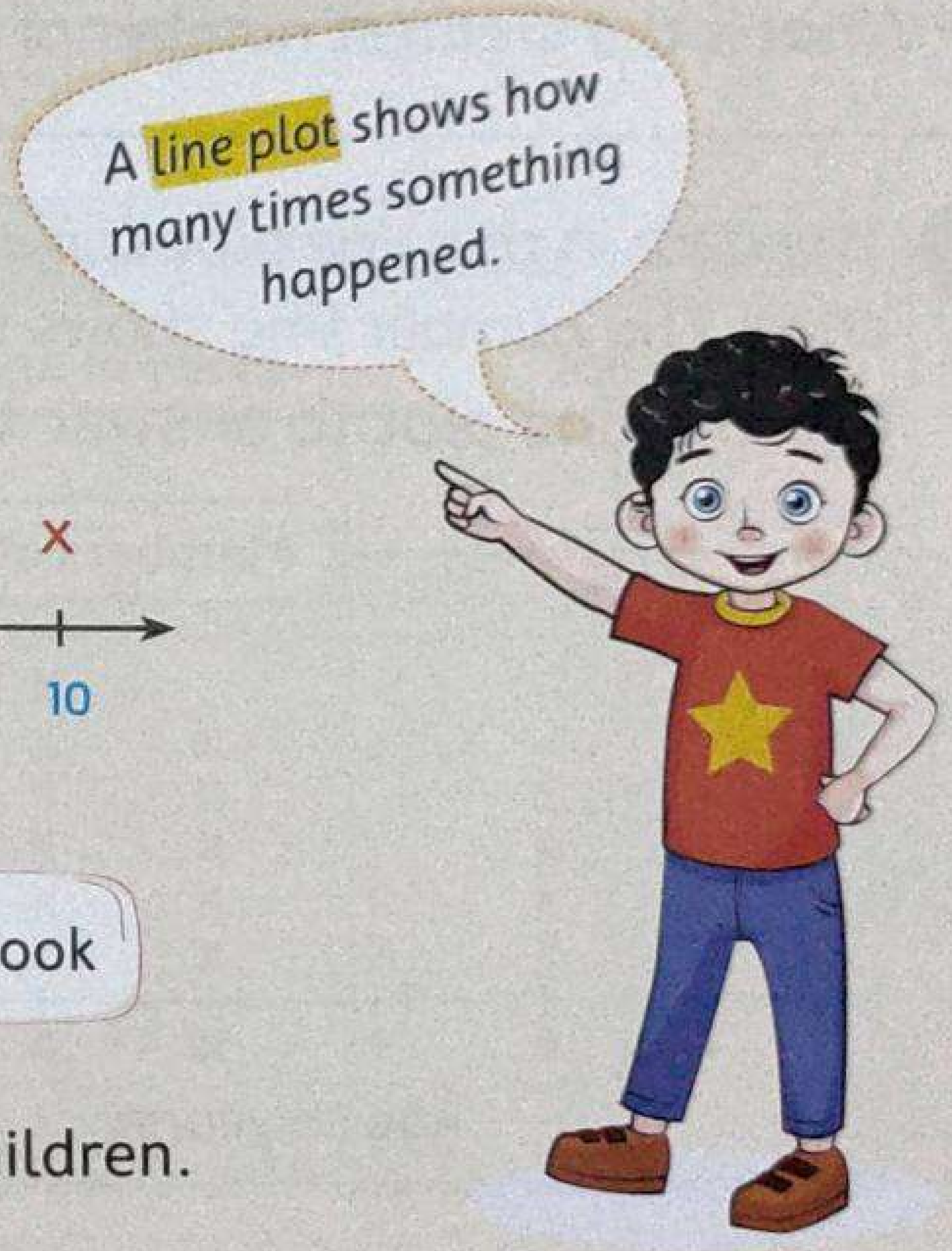
**Vocabulary**

*Line plot*
*It is a graph that shows the data as X's above a number line*

- How many books did you read this month ?

| Books | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tallies | \| | \|\| | \|\| | \| | ~~\|\|\|\|~~ | ~~\|\|\|\|~~ | ~~\|\|\|\|~~ \| | \|\|\| | \|\|\|\| | \| | \| |
| Children | 1 | 2 | 2 | 1 | 5 | 5 | 6 | 3 | 4 | 1 | 1 |




**Key** Each x on the line plot stands for one book

- How many children read 7 books ? 3 children.

## Check

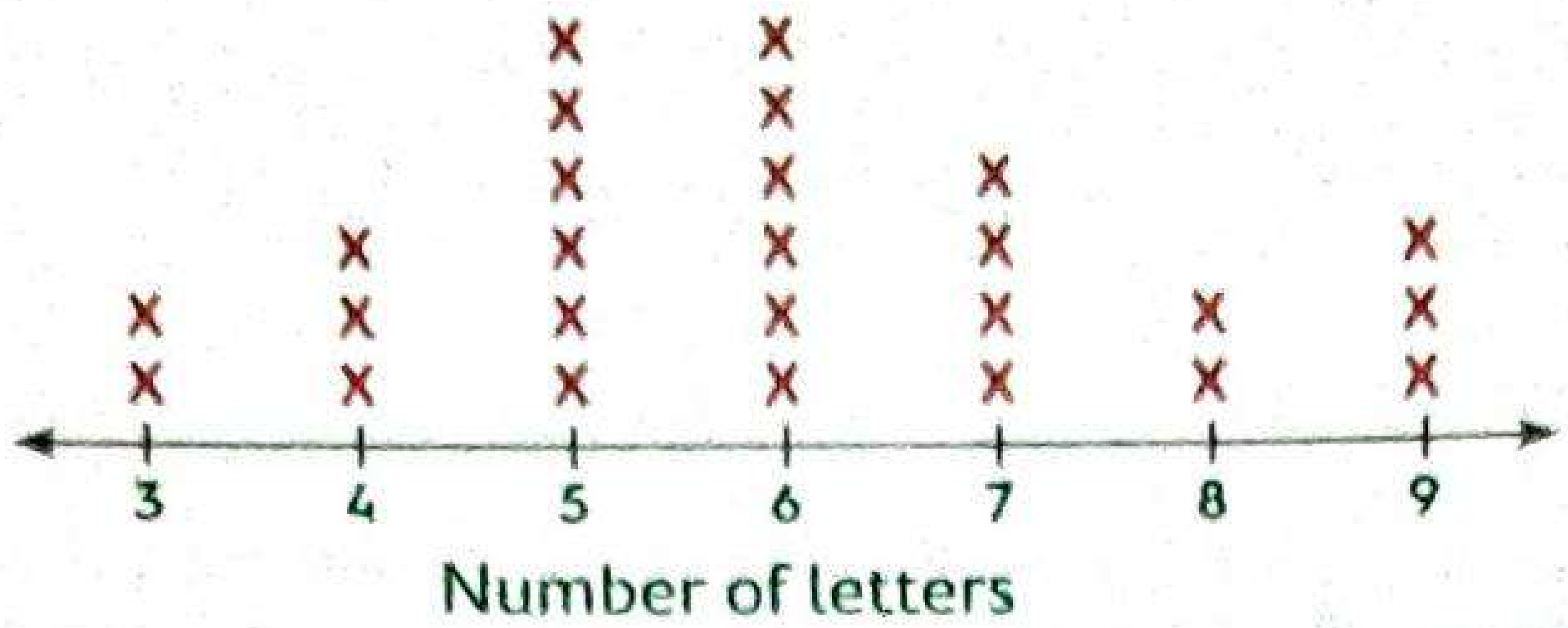
**Using previous line plot :**

- How many children read 5 books ? ______
- How many children read 6 books ? ______
- How many children did not read any book ? ______

## Practice

Use the line plot to answer the questions.

Number of letters in our first name




**Key**
Each X on the line plot stands for one child



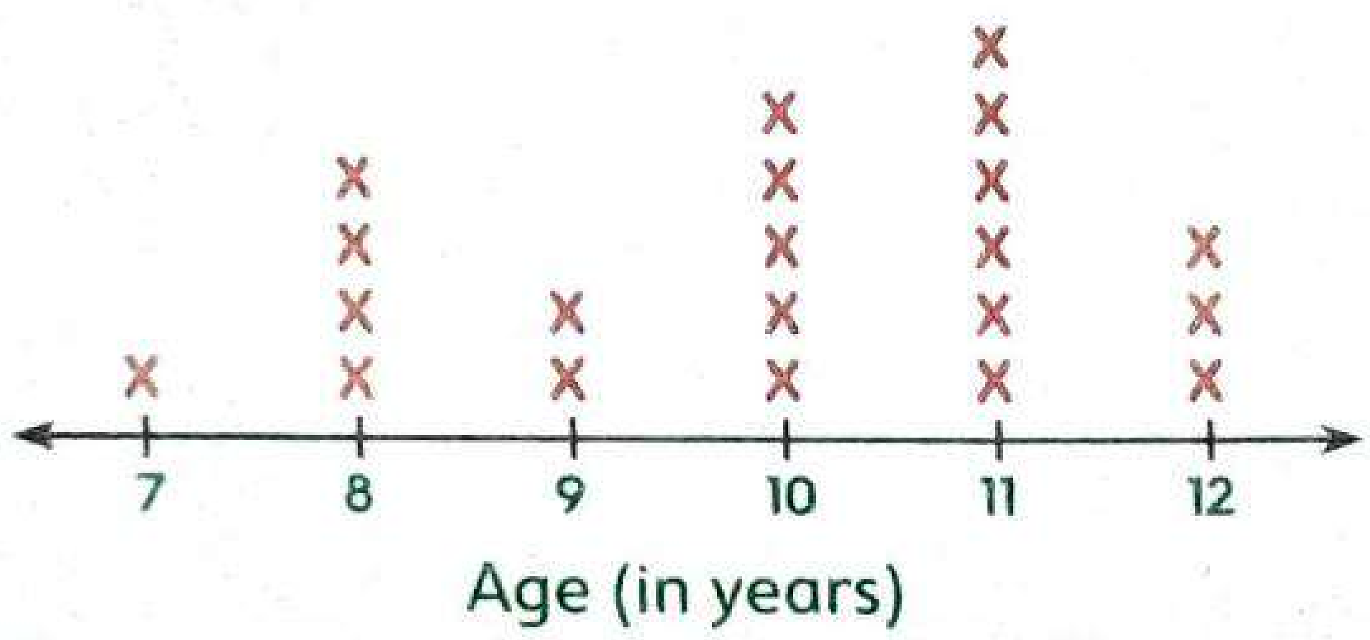
- How many children have 5 letters in their first name ? ______ children.
- What is the smallest number of letters in a child's first name ? ______ letters.
- What is the greatest number of letters in a child's first name ? ______ letters.

---

The data in this line plot shows the ages of a group of students in a school choir. The number line shows the ages of the students.

**Use the line plot to answer the questions.**

Members of the School Choir




**Key**
Each X stands for one member



- How many students are 8 years old ? ______
- How many students are 10 years old ? ______
- How many students are 12 years old ? ______
- What is the frequency of 11 years in this data ? ______
- How many students are in the choir ? ______
- How many students are younger than 10 years old ? ______



**Notes for parents**

- Remind your child that a number line can start at any number, and the numbers go on forever.
- Tell your child that the "frequency" means how many times a piece of data appears.

## Use the table to draw a line plot.

Marks of students in an exam




Number of students

**Key** Each **X** = ______ student

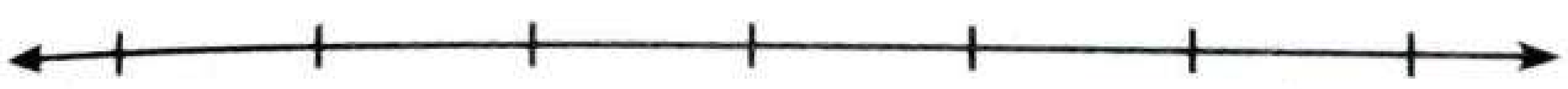
| Marks of students in an exam | |
|---|---|
| **Marks** | **Number of students** |
| 15 | 2 |
| 16 | 1 |
| 17 | 3 |
| 18 | 5 |
| 19 | 4 |
| 20 | 2 |



---

## Use the table to draw a line plot.

Ages of children in karate class



**Key** ______

| Ages of children in karate class | |
|---|---|
| **Age in years** | **Tallies** |
| 7 | \|\| |
| 8 | \|\|\|\| |
| 9 | \|\| |
| 10 | 𝍸 \| |
| 11 | \|\|\| |
| 12 | \|\| |
| 13 | \| |



**Use the line plot to answer the questions :**

- How many children in the class are 11 years ? ______ children
- What age is the greatest number of children ? ______ years old
- How many children are in karate class in all ? ______ children

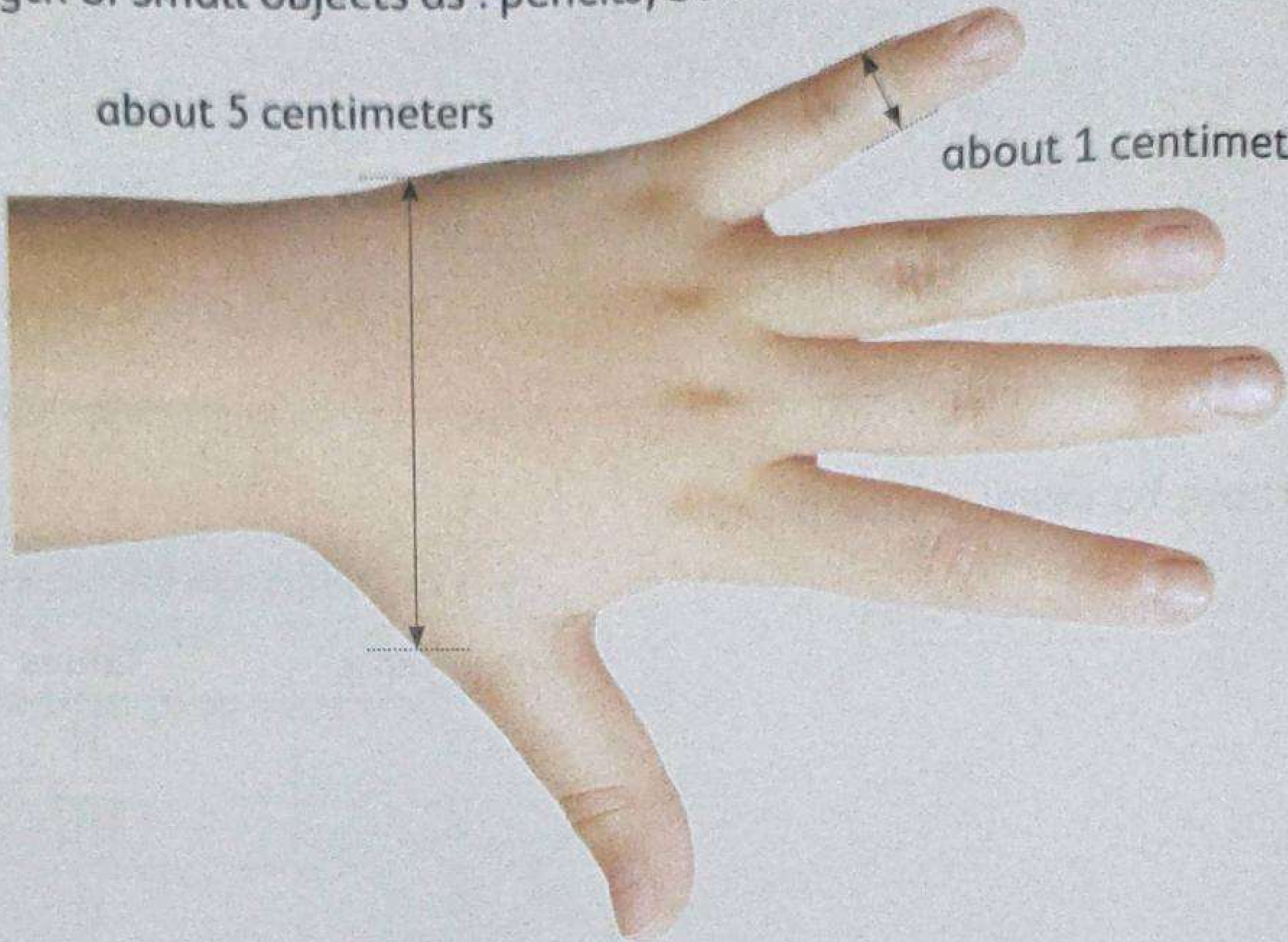
• Remind your child that "𝍸" equals 5 times.

Place a smiley face

Lessons
# 5 to 7 Measuring lengths (Centimeter & Meter)

## Learn Centimeter

- A centimeter (cm) is a small standard unit of measuring length, used to measure the length of small objects as : pencils, books and erasers.

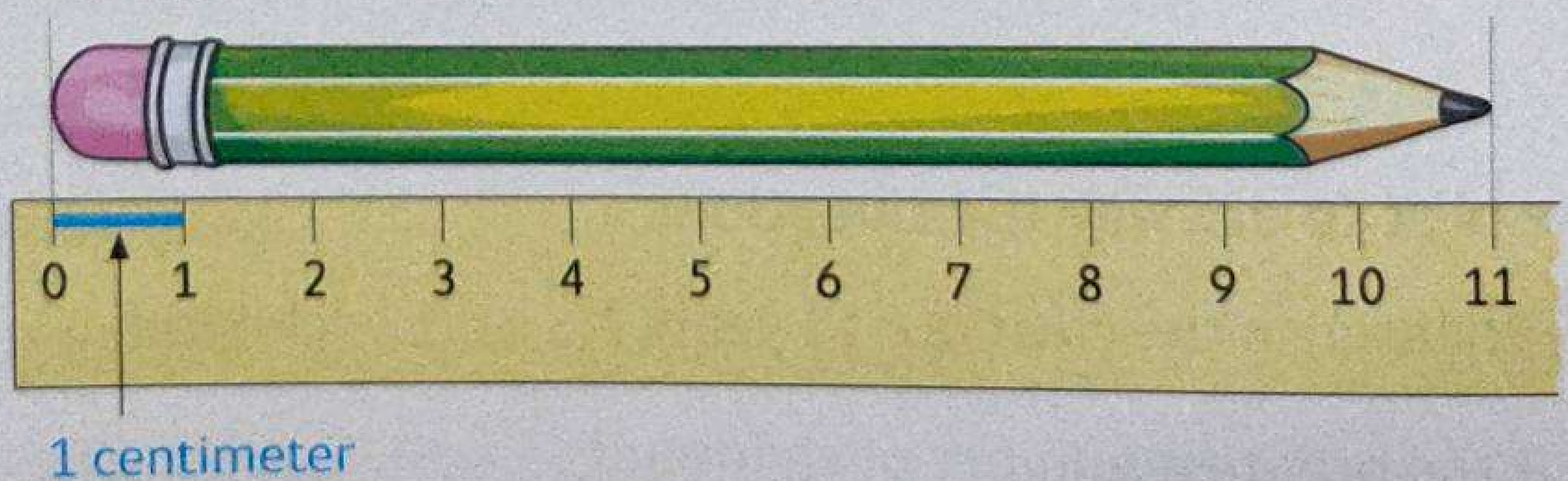



- **How to use a ruler to measure the length of any object as a pencil ?**

**Step 1**
Line up one end of the pencil with the zero mark on the ruler.

**Step 2**
Find the centimeter mark on the ruler that is at the other end of the pencil.

- **What is the length of the pencil in centimeters ?**



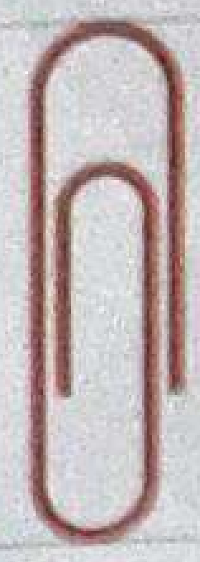

The length of the pencil is 11 cm

**Notes for parents**

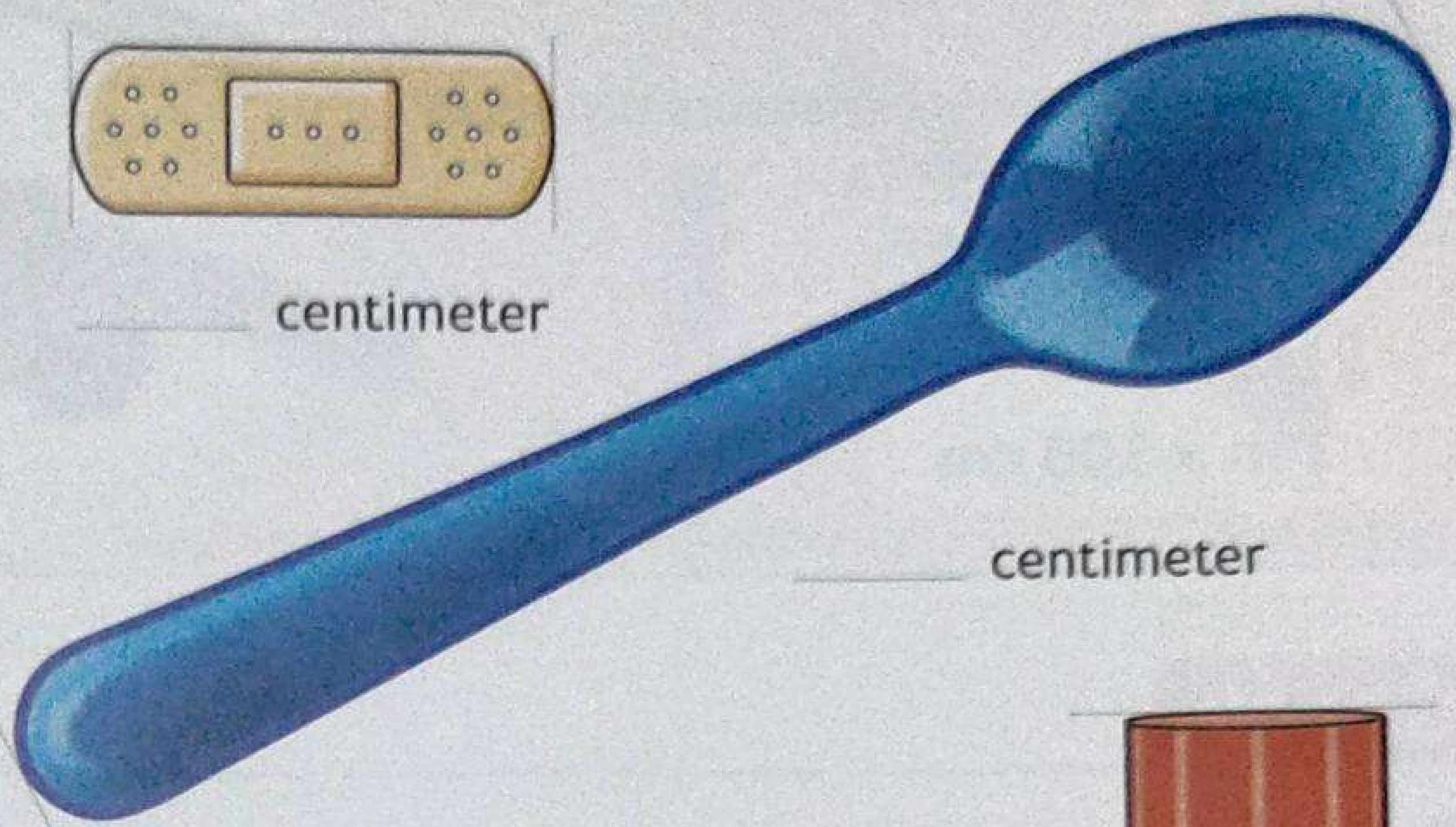
- Let your child use a centimeter ruler to measure the length of his/her hand.

## Check

Measure the length of each object circle the longest one and tick ✓ the shortest one.



_____ centimeter

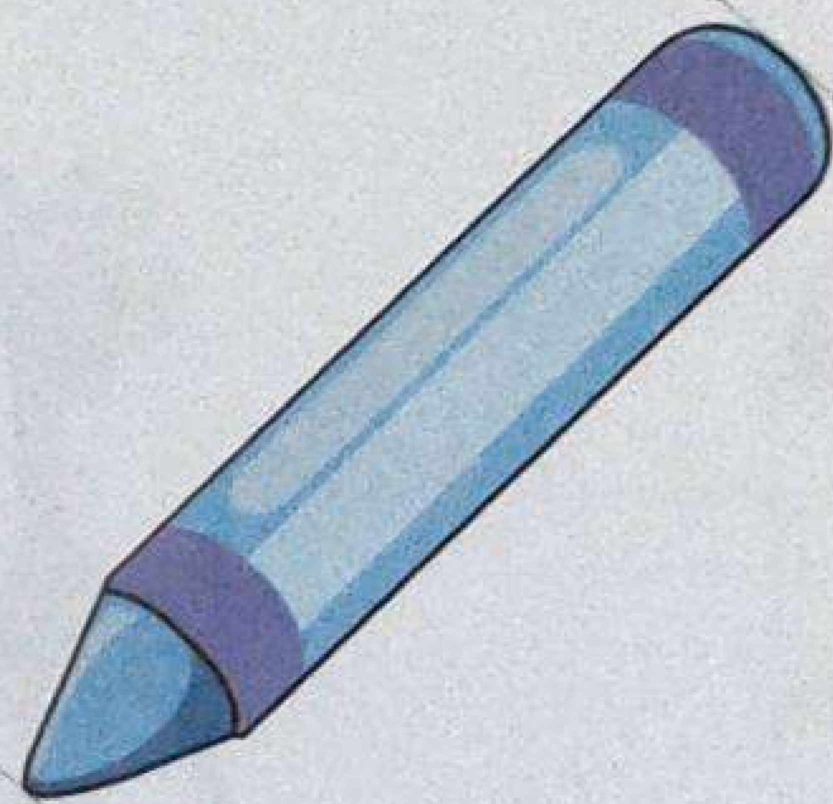


_____ centimeter

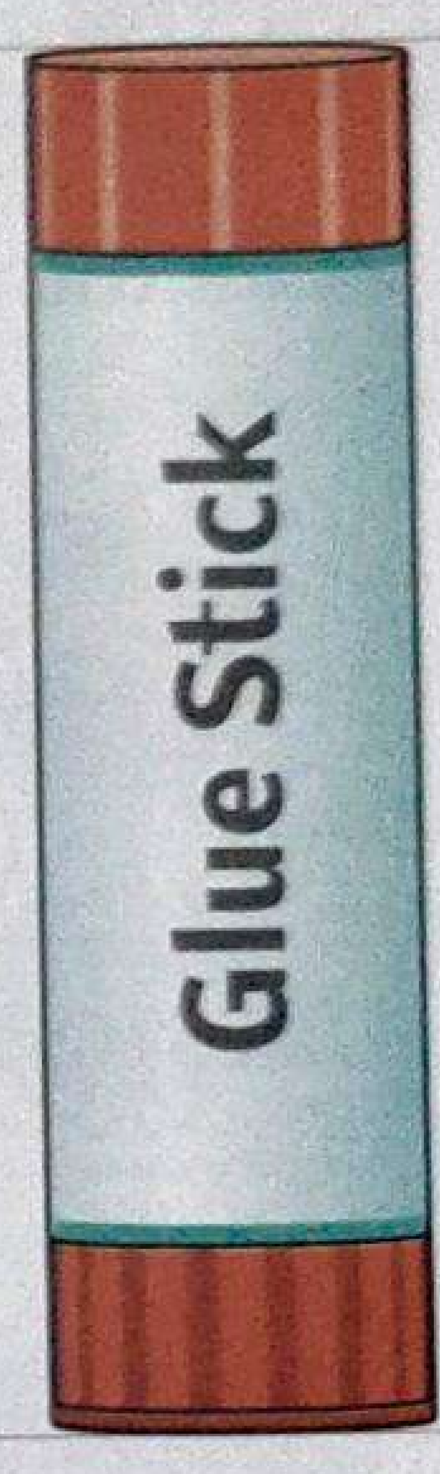
_____ centimeter



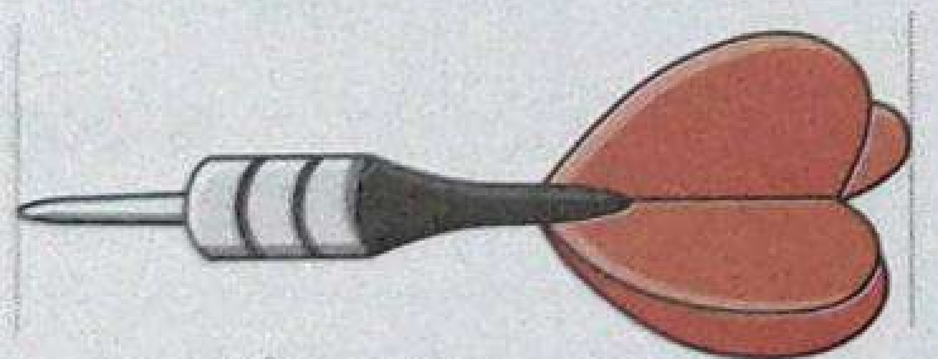
_____ centimeter



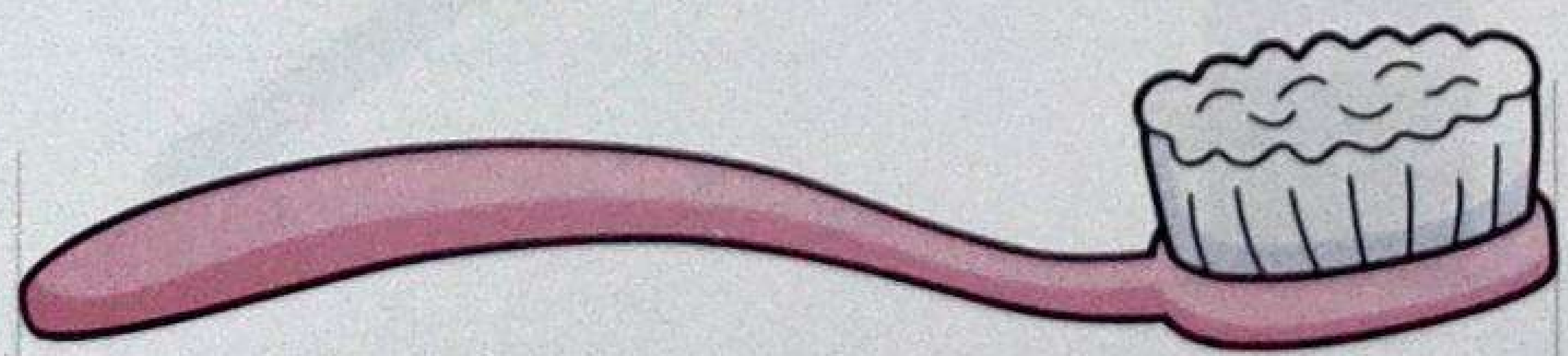
_____ centimeter




_____ centimeter



_____ centimeter



_____ centimeter

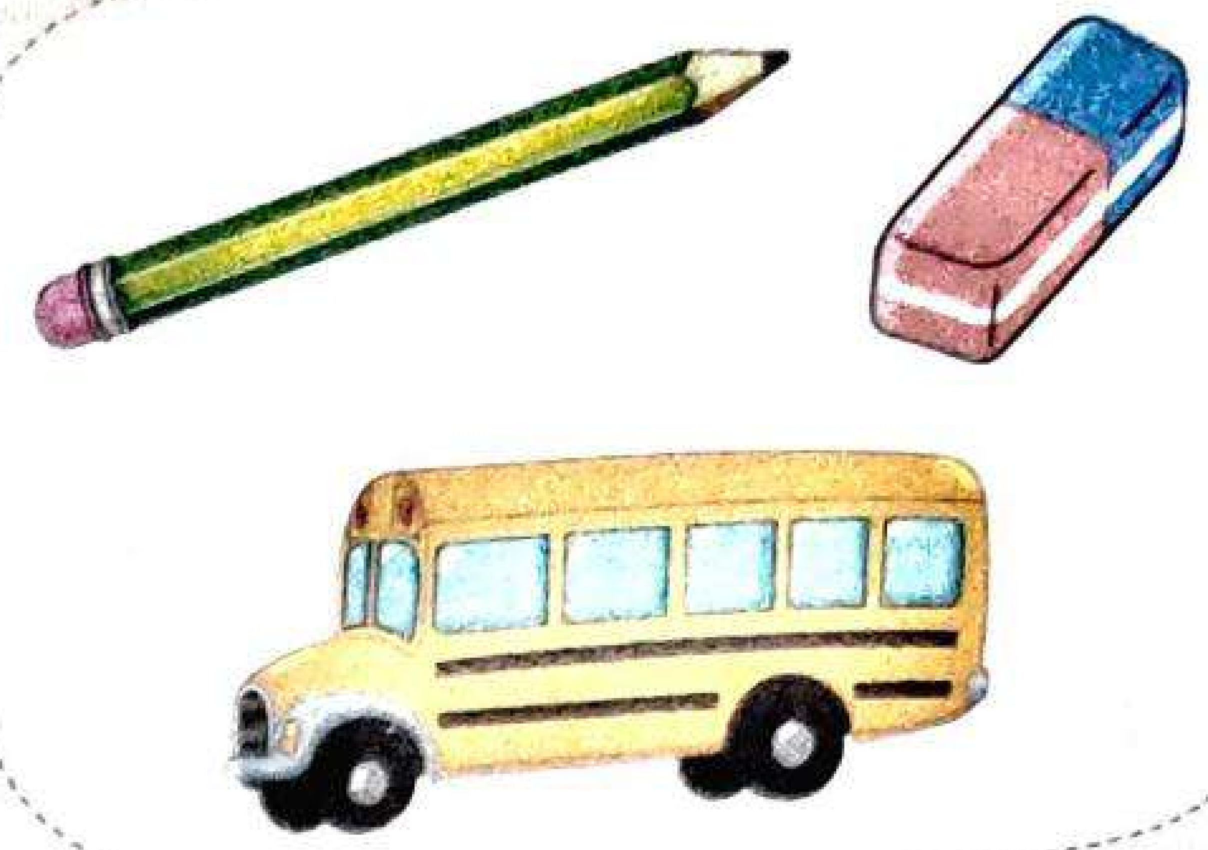



_____ centimeter

• Help your child to use a centimeter ruler to measure objects at home.

## Learn Centimeter and meter

- Centimeter (cm) is used to measure short lengths as : pencils, books and erasers.
- Meter (m) is used to measure distances and longer lengths as : buildings and buses.

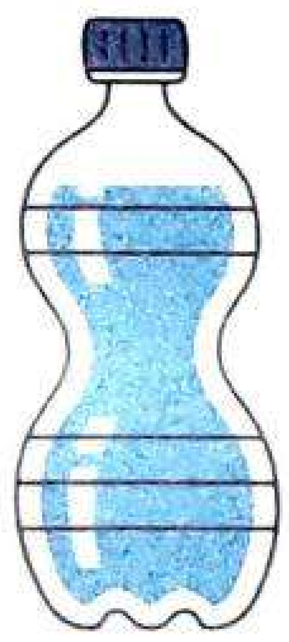


**Remember**

1 m = 100 cm

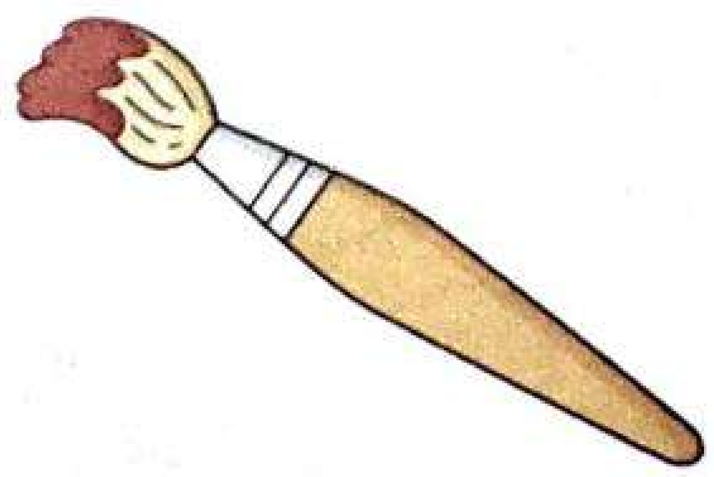
## Check

Write the suitable unit (centimeter or meter) to measure each object.













**Notes for parents**

- Ask your child to find something at home is about 5 cm in length, width or height, and another something is about 1 m.

## Practice

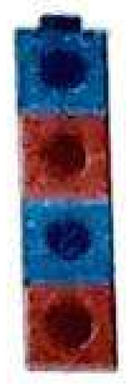
Measure the length of each stripe and write its length, then arrange from the longest to the shortest.



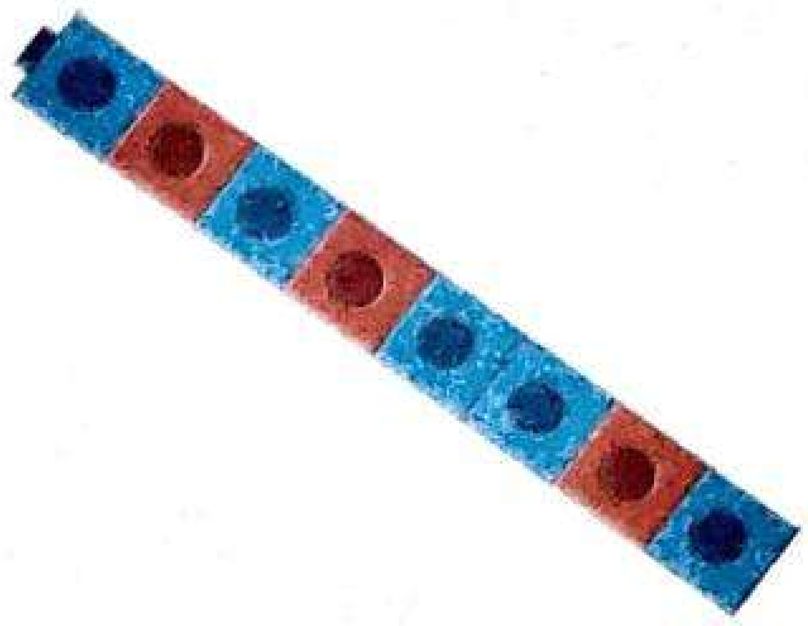
....... centimeter



....... centimeter



....... centimeter



....... centimeter

The order is : ☐ , ☐ , ☐ , ☐

Estimate and match.

about 2 cm.

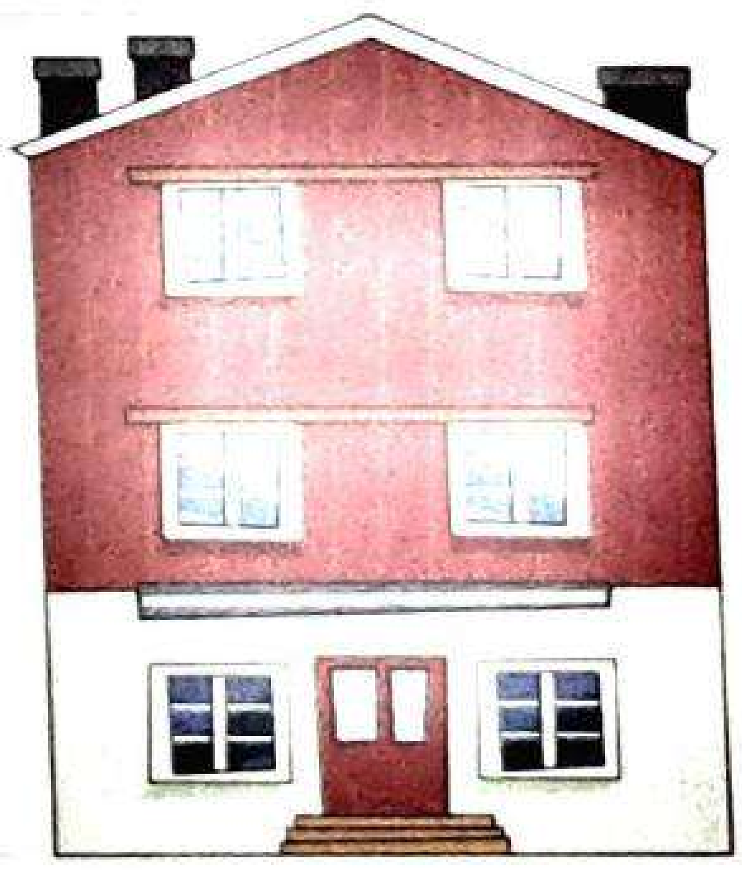
about 10 m.

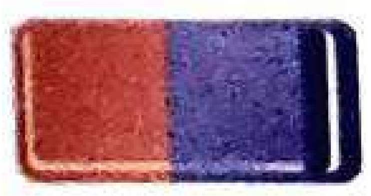
about 2 m.

about 10 cm.







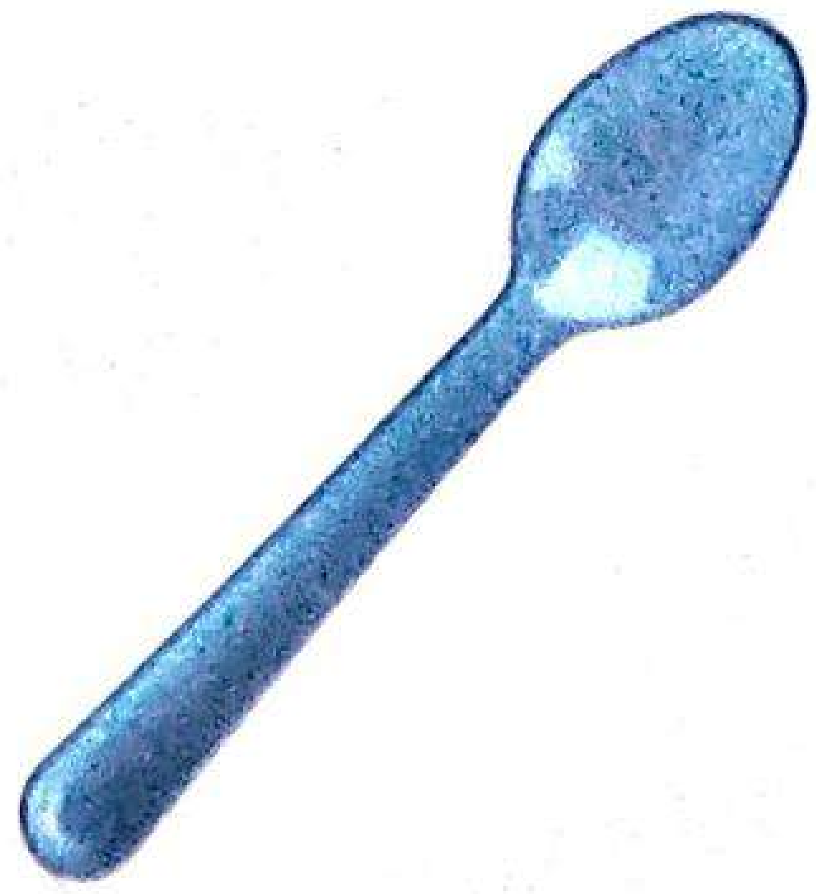


- Ask your child to measure the lengths of his/her coloring pencils then arrange them from the shortest to the longest.

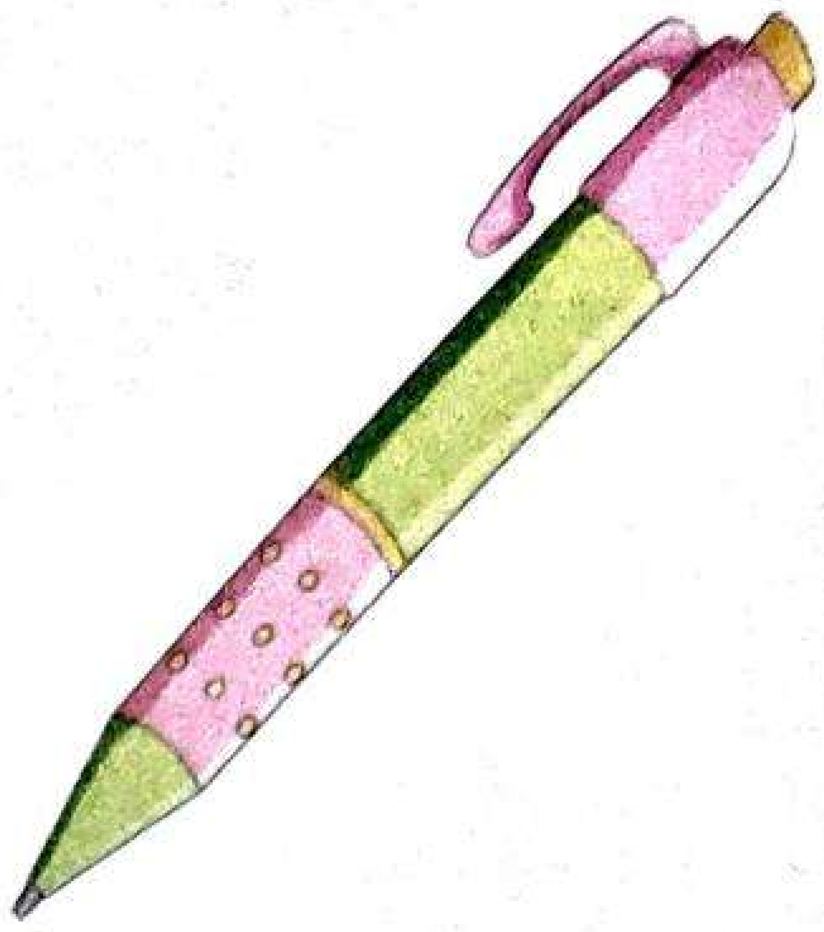
Measure the length of the items. Complete the table, then create a line plot for these data.



______ centimeter



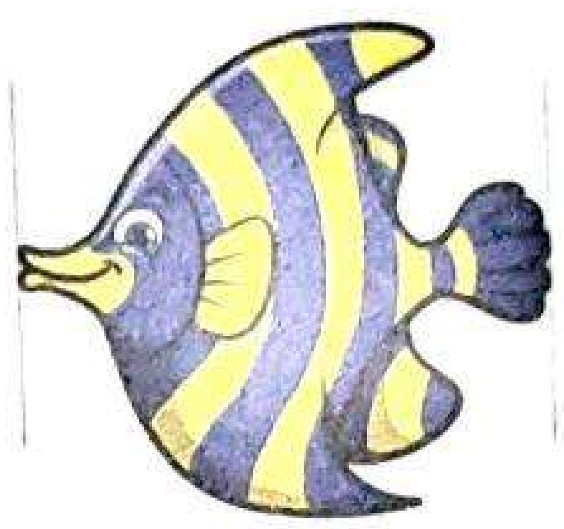
______ centimeter



______ centimeter



______ centimeter



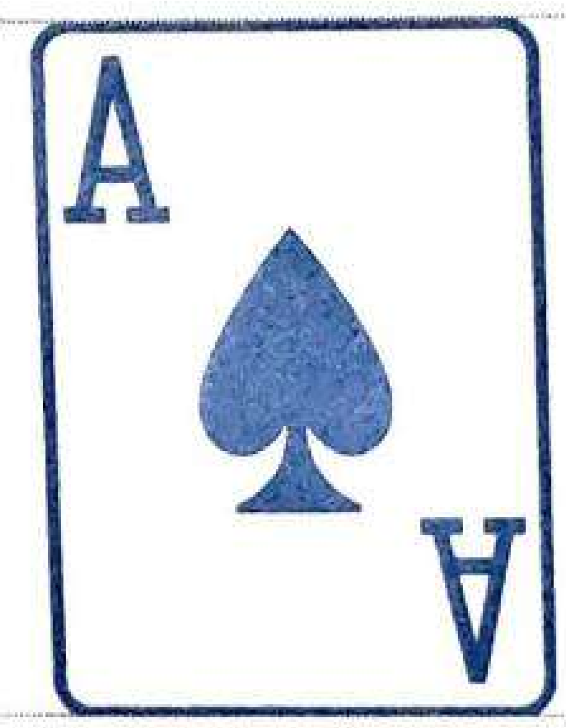
______ centimeter



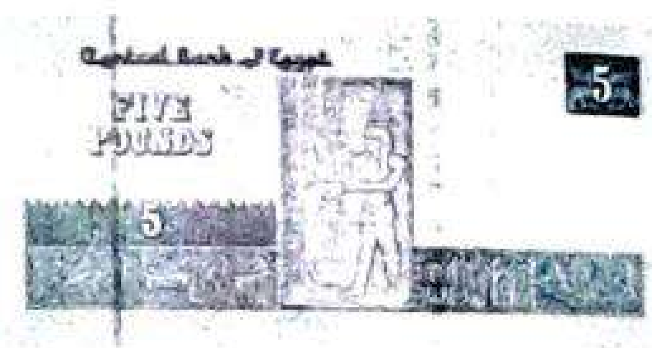
______ centimeter



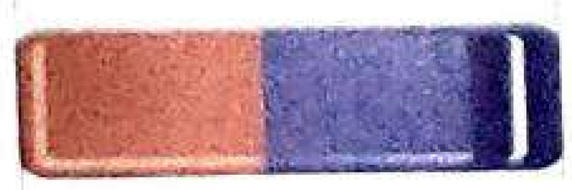
______ centimeter



______ centimeter



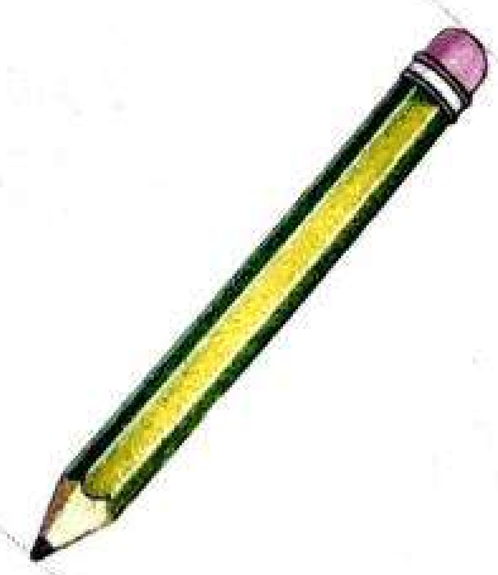
______ centimeter



______ centimeter



______ centimeter



______ centimeter

**Notes for parents**

- Ask your child to draw 3 lines and let him/her to use a centimeter ruler to measure and estimate their lengths.



Key Each X represents one item.

| Length in cm | Number of items |
|---|---|
| 2 | ........ |
| 3 | ........ |
| 4 | ........ |
| 5 | ........ |
| 6 | ........ |
| 7 | ........ |



- What is the frequency of the longest length ? ..................
- What is the frequency of the shortest length ? ..................

---

Use a tape measure to measure the distance around the wrist of each of your classmates.

**Fill in the table, then complete the pictograph.**

| Length of wrist | | |
|---|---|---|
| **Length** | **Tally** | **Number** |
| 10 cm | | ...... |
| 11 cm | | ...... |
| 12 cm | | ...... |
| 13 cm | | ...... |
| 14 cm | | ...... |

| Length of wrist | |
|---|---|
| 10 cm | |
| 11 cm | |
| 12 cm | |
| 13 cm | |
| 14 cm | |

Key
 = 2 students
 = 1 student

- Let your child to make a connection between lengths and plot line.
- Help your child to solve the challenge.

Place a smiley face

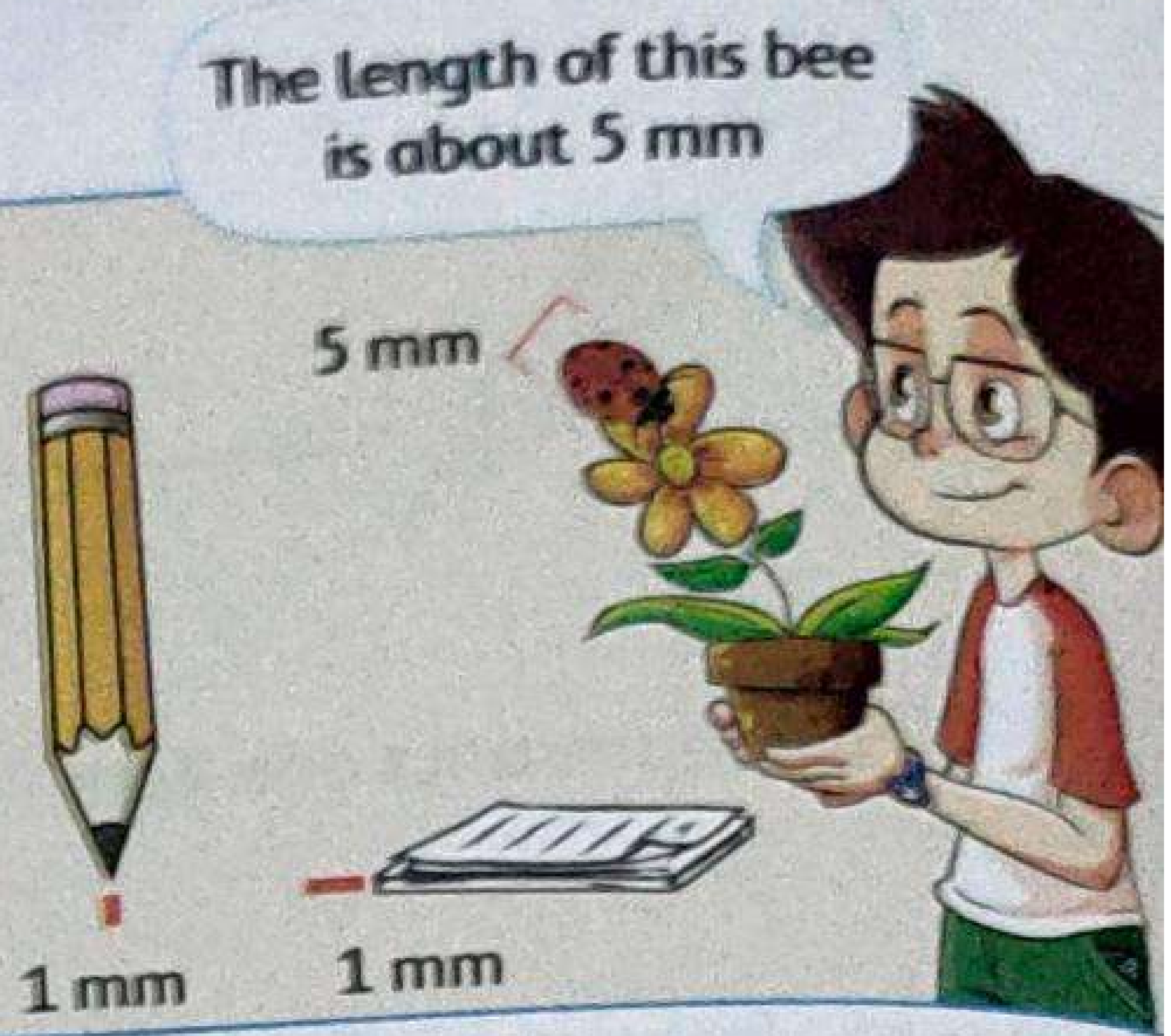
Lesson 8

# Measuring lengths (Millimeter)

## Learn Millimeter

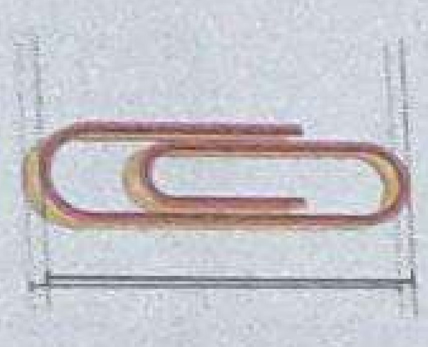
- A millimeter (mm) is a very small standard unit of measuring length.

  It is used to measure the length of a very small object as the length of an insect.
- A millimeter is about the width of the point of the end of your pencil or the thickness of 10 sheets of paper stacked together.

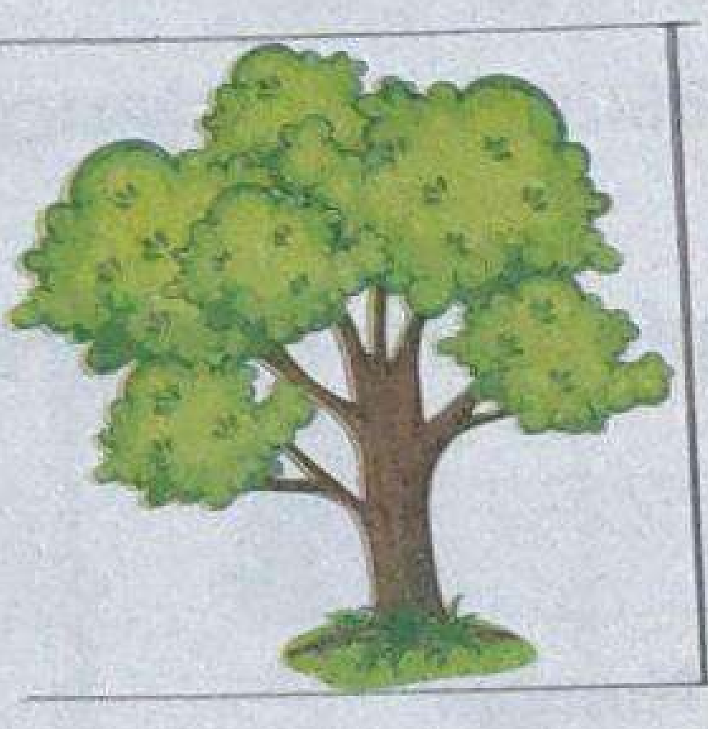



## Check

Tick (✓) the suitable unit to measure each object.



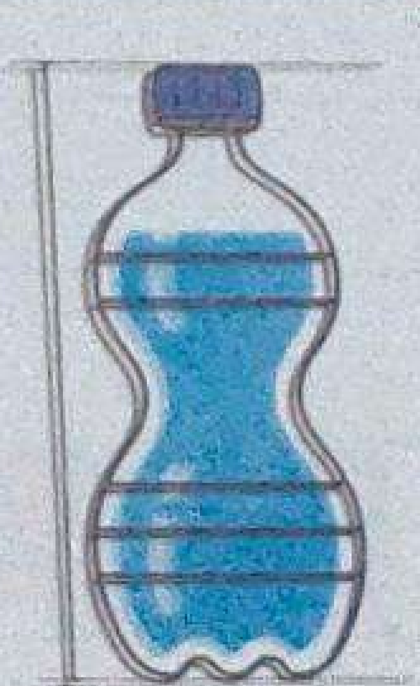
mm ☐ m ☐



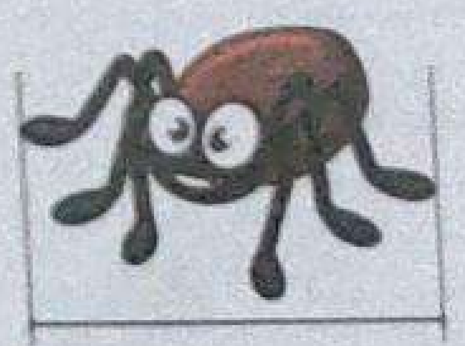
mm ☐ m ☐



mm ☐ m ☐



mm ☐ cm ☐



mm ☐ m ☐



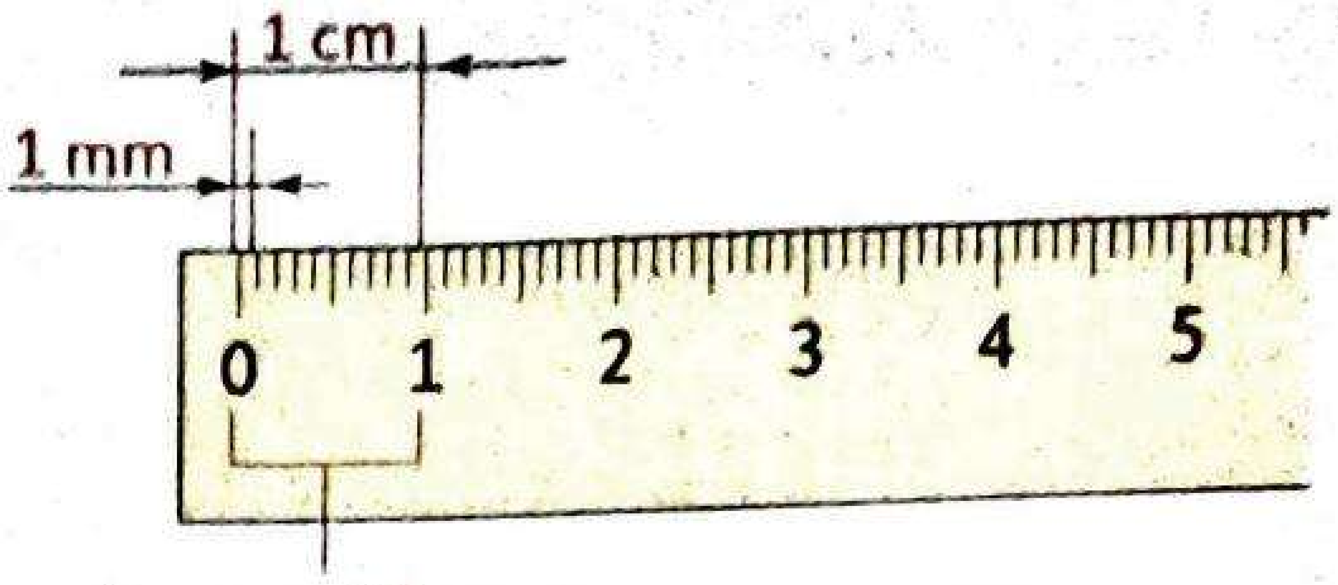
mm ☐ m

**Notes for parents**

- Ask your child to find objects at home he/she can measure it in millimeter.

## Learn Millimeter and centimeter

- A millimeter is smaller than a centimeter.
- There are 10 millimeters in 1 centimeter.




1 cm = 10 mm

*Think*

- *How many millimeters are there in 2 centimeters ? 20 mm*
- *How many millimeters are there in 3 centimeters ? 30 mm*



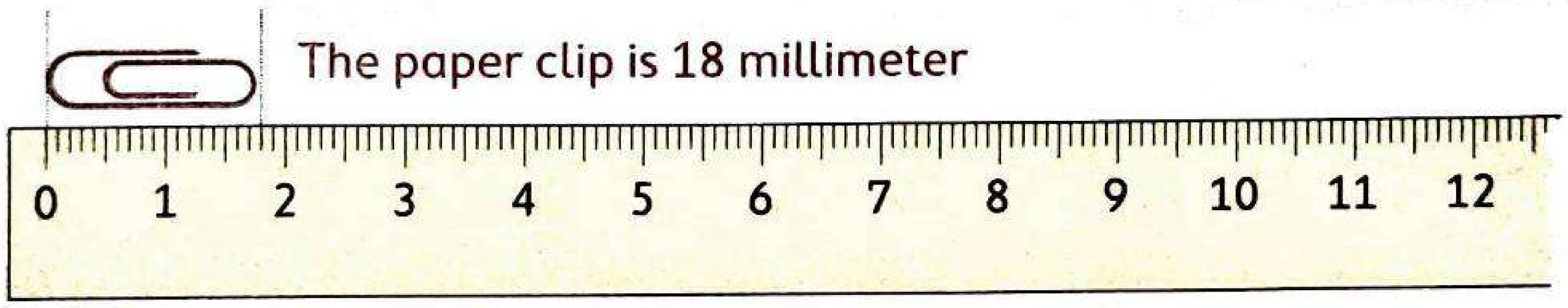
**Generally**

2 cm = 20 mm , 3 cm = 30 mm

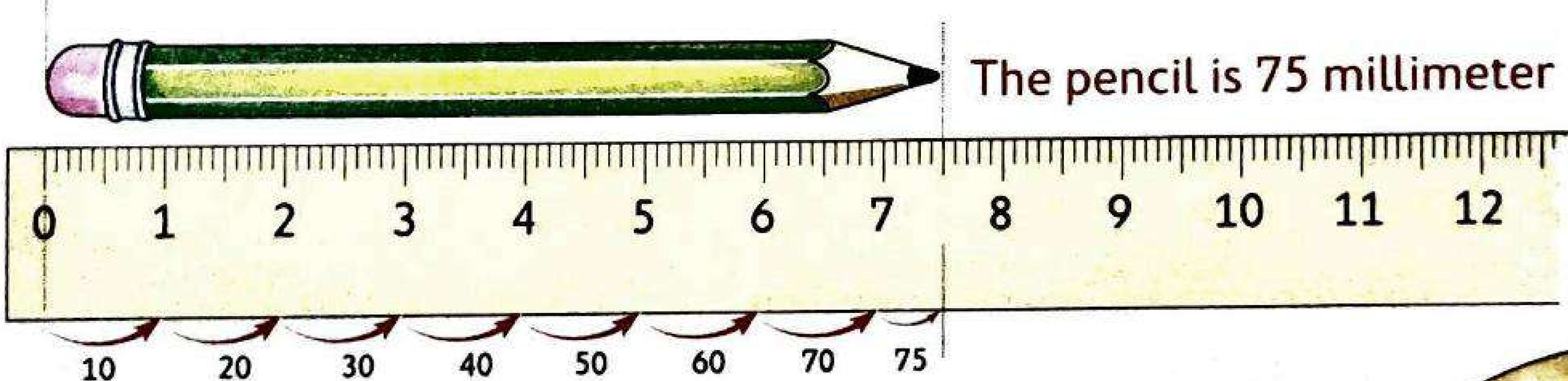
4 cm = 40 mm , 5 cm = 50 mm , ... etc.

**Notice that**

- When moving from centimeters to millimeters, the number gets a zero on the end.
- How to use a ruler to measure a length in millimeter ?




The paper clip is 18 millimeter




The pencil is 75 millimeter

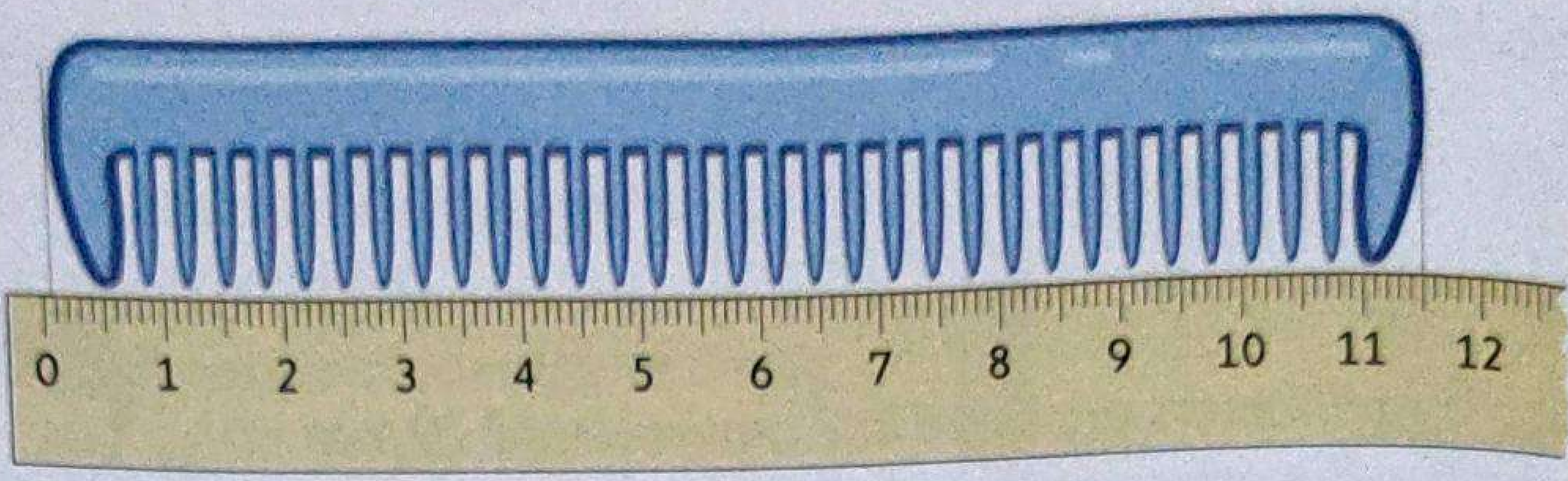



*You can count by 10*

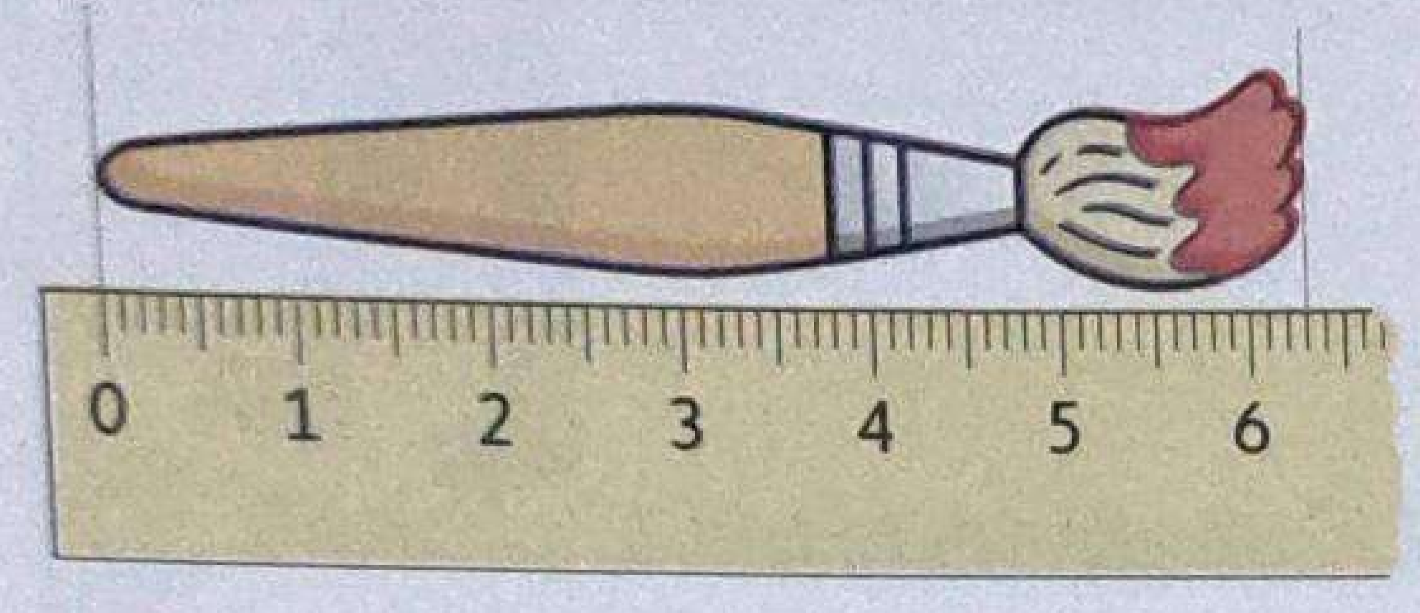
- Later in this year, your child will understand that when moving from centimeters to millimeters he/she can multiply by 10.

## Check

Measure the length of each object.



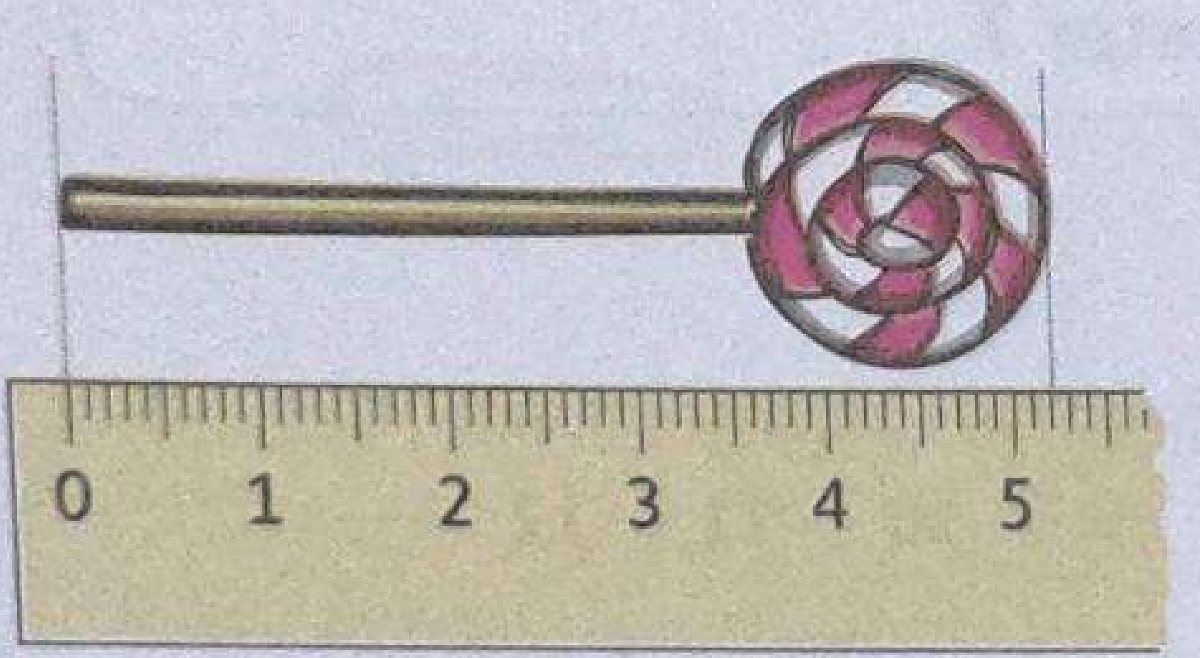

_____ millimeter



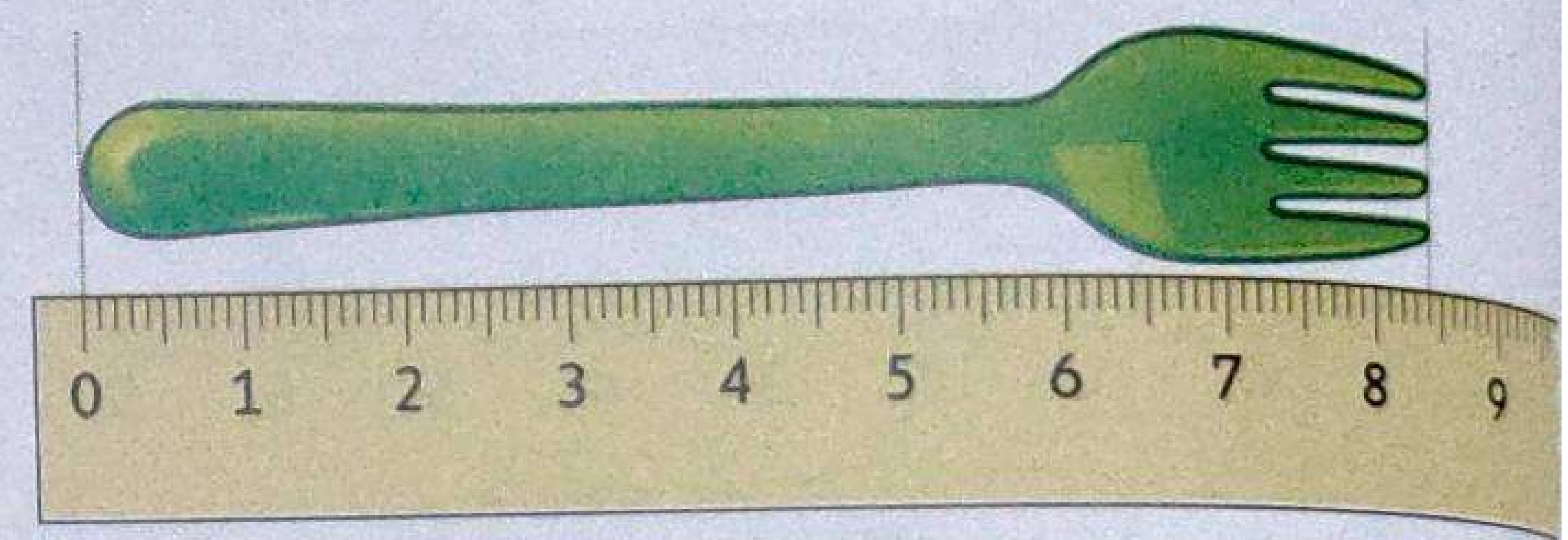

_____ millimeter



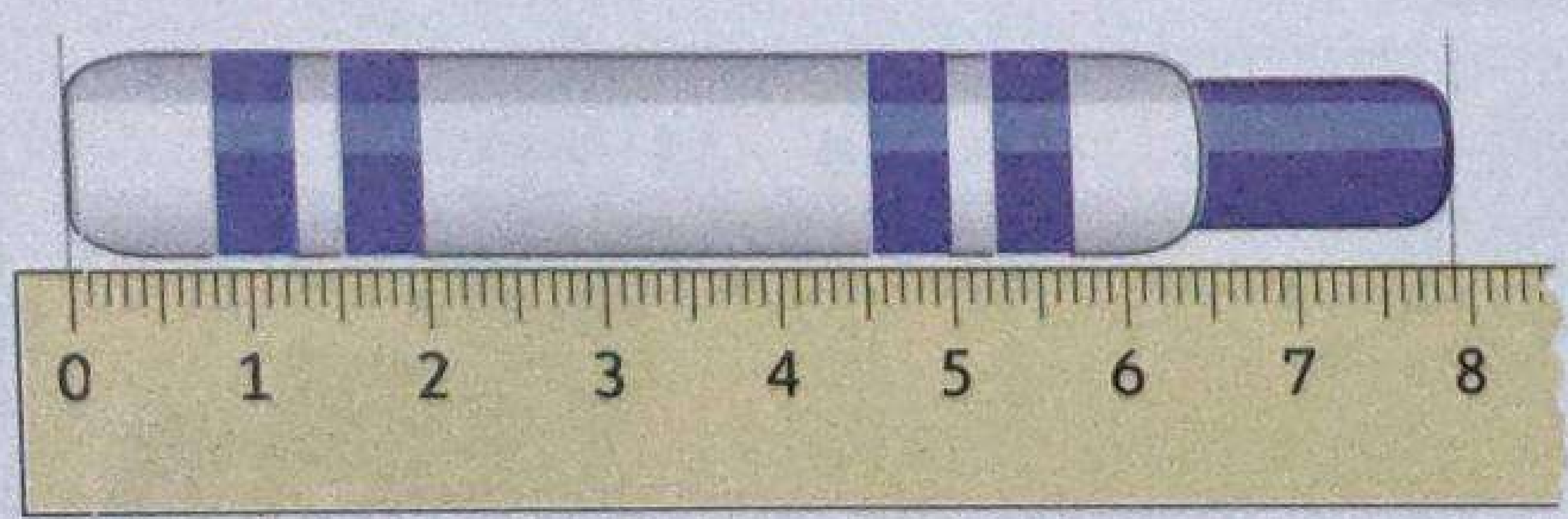

_____ millimeter



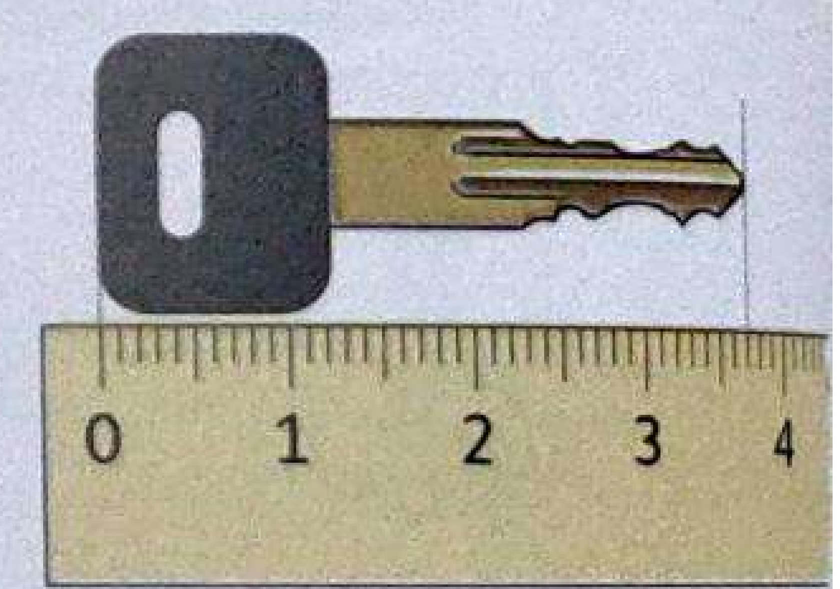

_____ millimeter




_____ millimeter




_____ millimeter



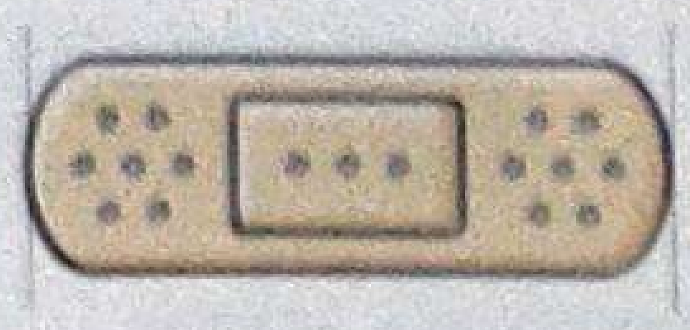

_____ millimeter

**Notes for parents**

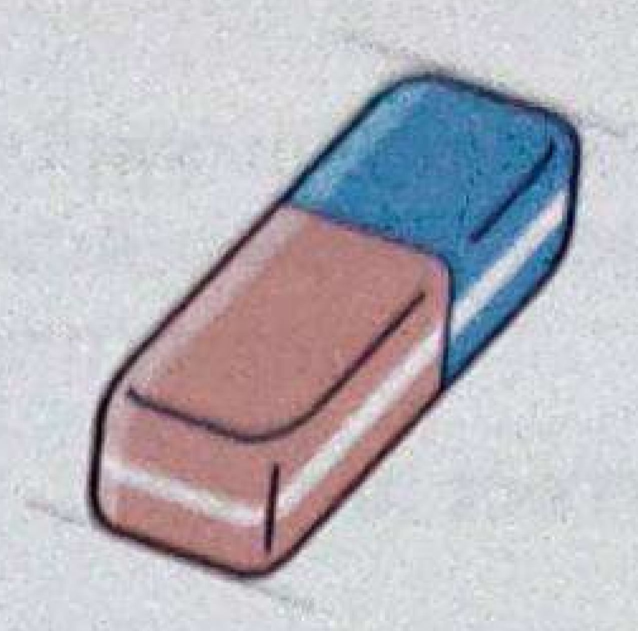
- Have your child measure some objects around home using a centimeter ruler.

## Practice

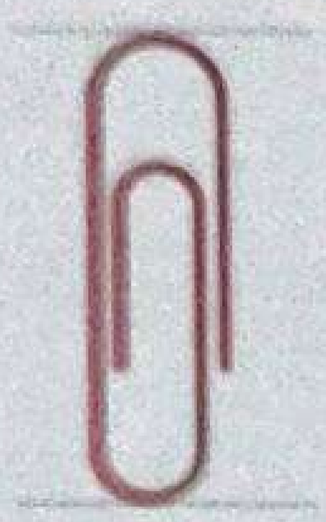
Use a ruler to measure the length of each of the following.



_____ millimeter



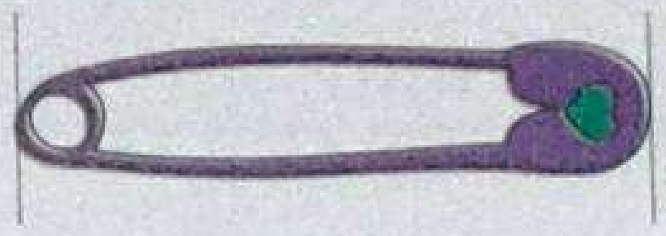
_____ millimeter



_____ millimeter



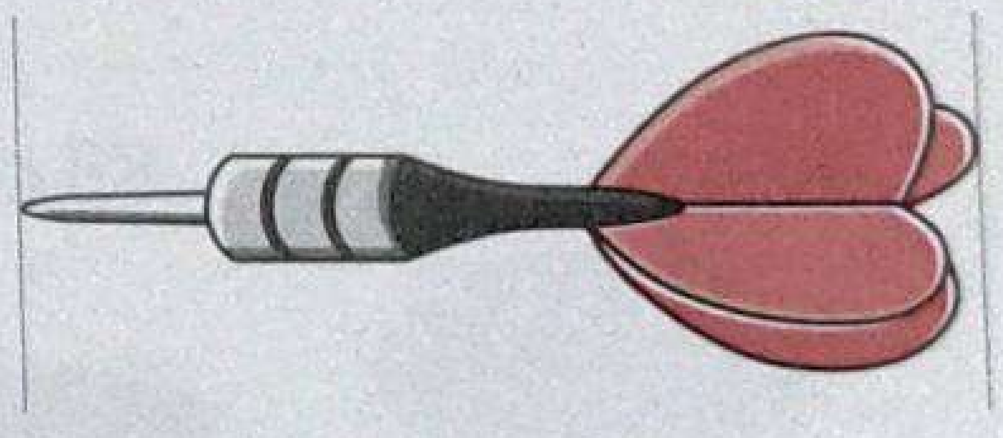
_____ millimeter



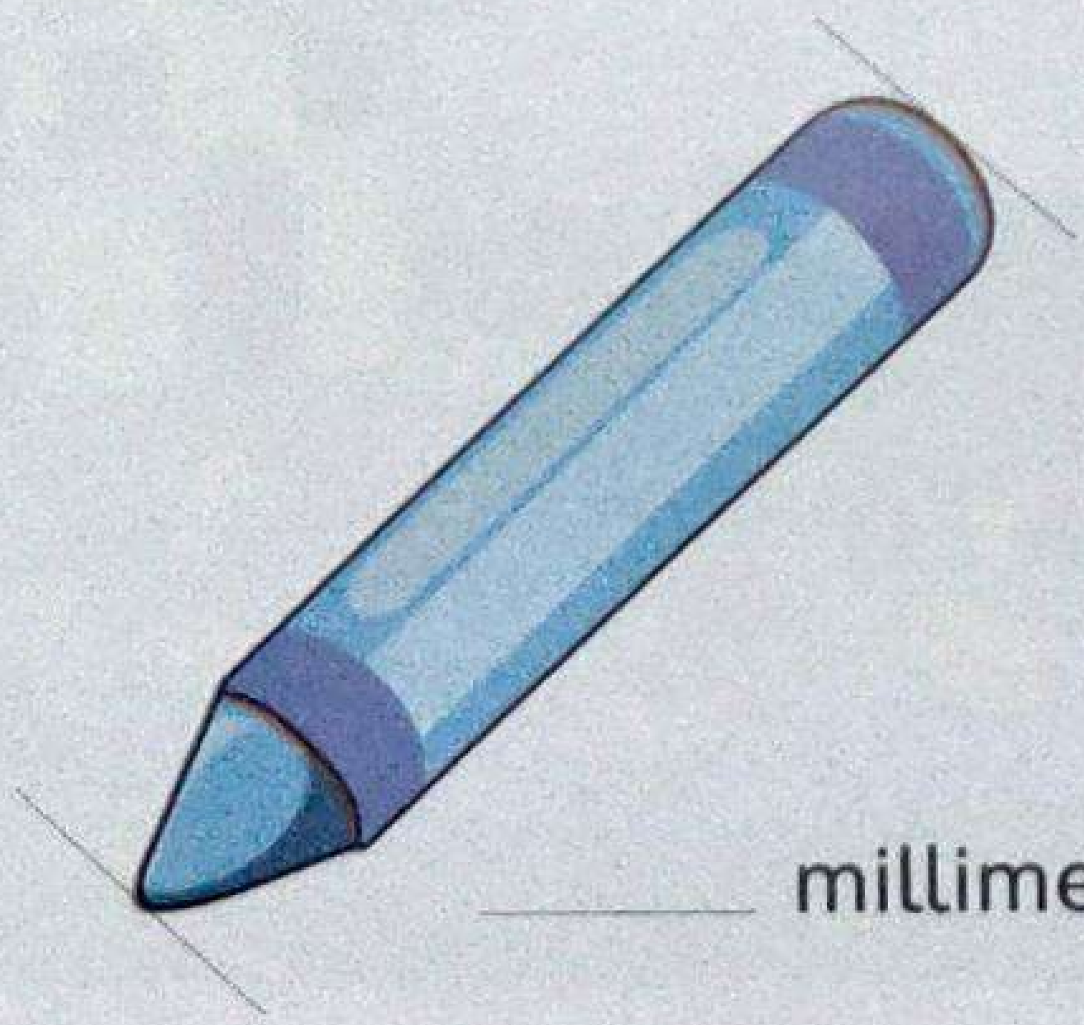
_____ millimeter



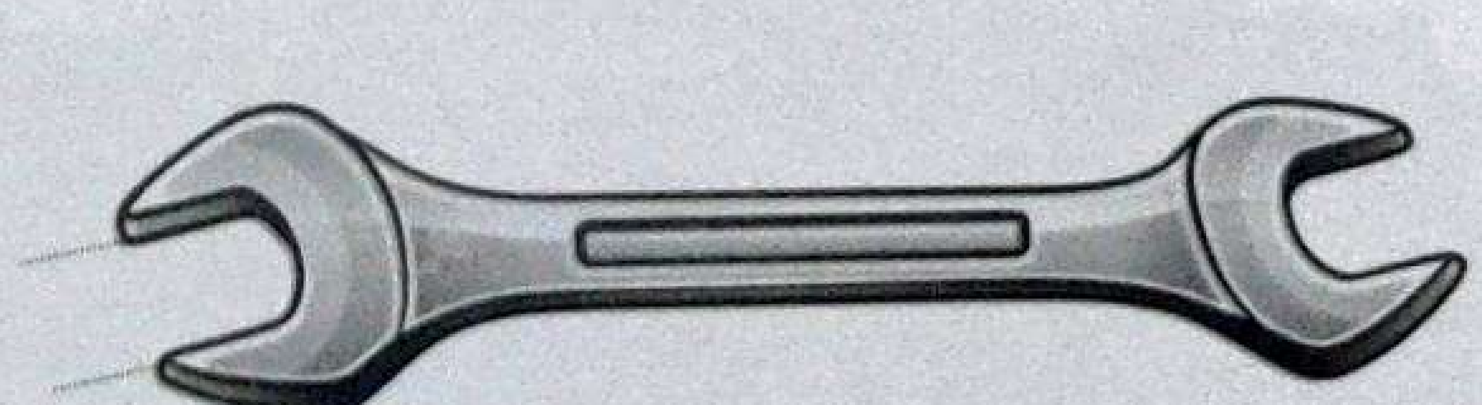
_____ millimeter



_____ millimeter



_____ millimeter



_____ millimeter

- Give your child 4 strings and ask him/her to use a ruler to measure their lengths, then put them in order from the longest to the shortest.




You can use counting by 10

## Complete.

- 7 cm = ______ mm
- 9 cm = ______ mm
- 10 mm = ______ cm
- 18 cm = ______ mm
- ______ cm = 40 mm
- 200 mm = ______ cm

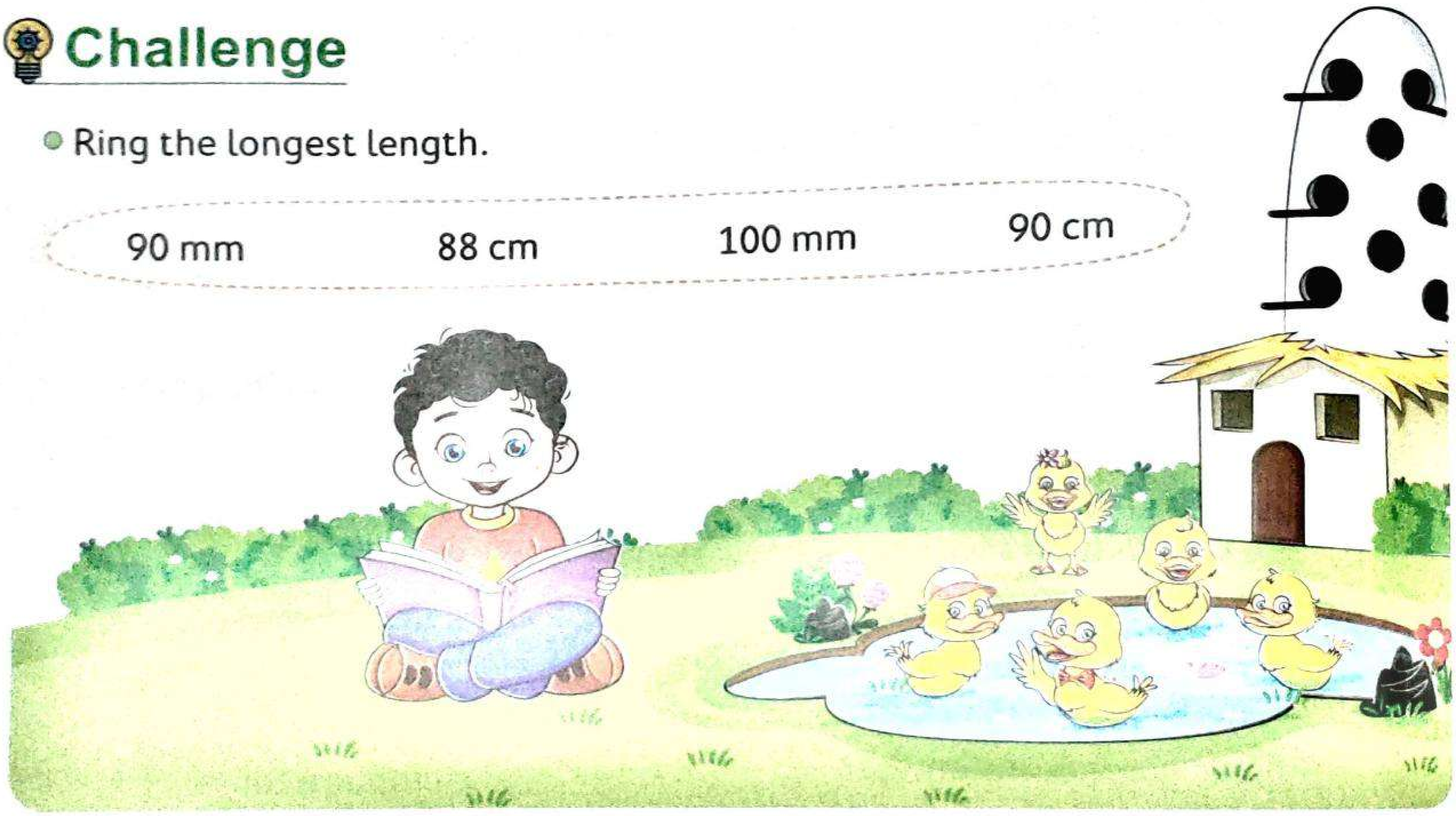
## Choose the correct answer.

- 3 cm = ______ mm (3 or 30 or 300)
- 24 cm = ______ mm (240 or 40 or 200)
- 70 mm = ______ cm (70 or 700 or 7)
- 500 mm = ______ cm (50 or 5 or 55)
- ______ cm = 60 mm (600 or 6 or 60)

## Challenge

- Ring the longest length.

90 mm 88 cm 100 mm 90 cm



**Notes for parents**

- Let your child remember that to move from centimeter to millimeters he/she put 0 at the and of the number.

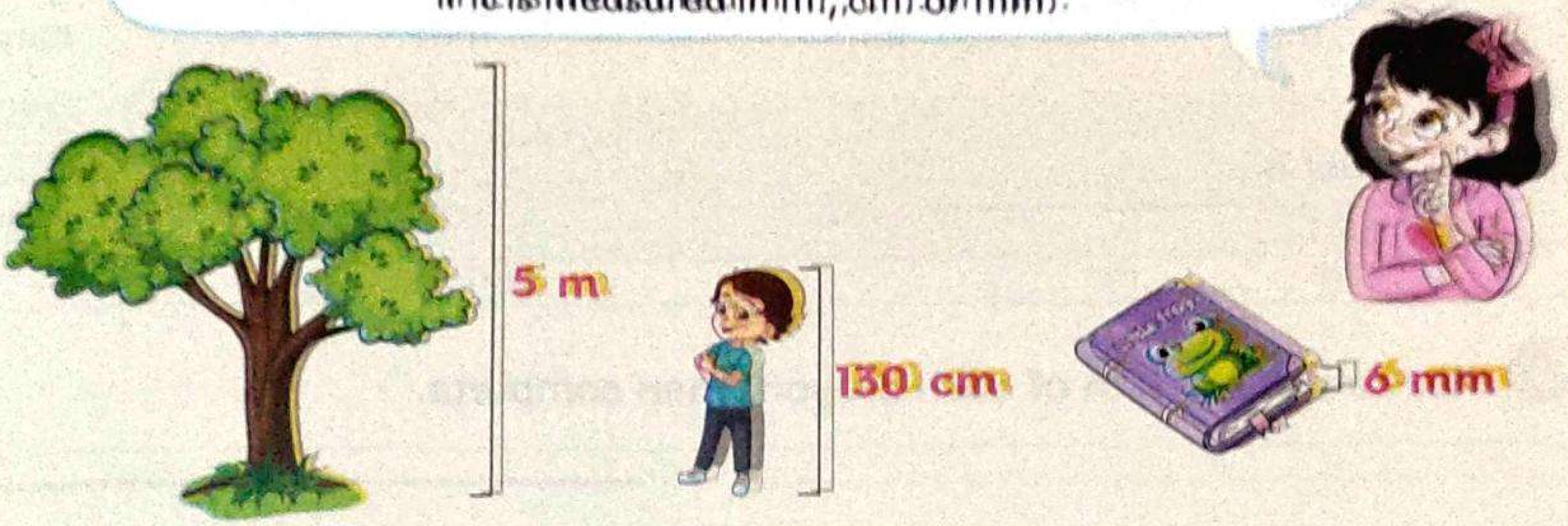
Place a smiley face

Lessons

# 9&10 Reviewing measuring lengths

## Remember

meter, centimeter and millimeter are three units of measuring lengths. The length of any object does not change if it is measured in m, cm or mm.




## Practice

**Did you know**

A king Cobra is the biggest of all poisonous snakes and can grow to over 4 meters long.

Ring the estimating length.

| | | |
|---|---|---|
|  80 cm   80 m |  6 mm   6 m |  15 cm   8 mm |
|  10 cm   10 mm |  500 mm   500 cm |  300 cm   300 m |

- Ask your child to find an object at home is about 1 meter in length or width and another object is about 300 cm.

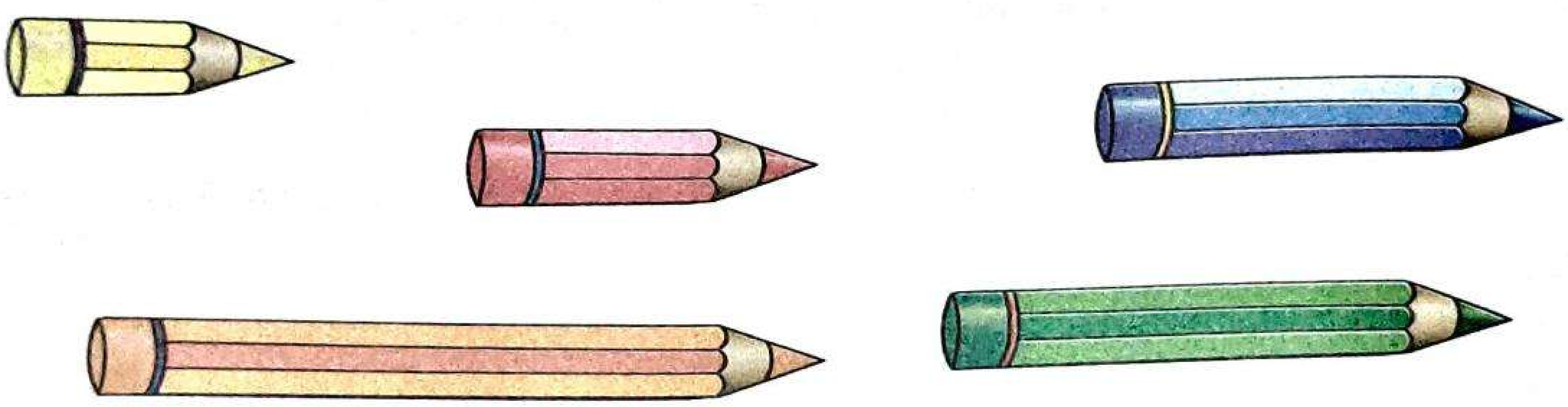
Measure the length of each string, then arrange from the shortest to the longest.



____ mm ____ mm ____ mm ____ mm

The order is : ____ , ____ , ____ , ____

Measure the length of each crayon, then complete.



| Crayon | Green | Yellow | Blue | Orange | Red |
|---|---|---|---|---|---|
| Length | | | | | |

- The color of the longest crayon is ____
- The color of the shortest crayon is ____

**Notes for parents**

- Ask your child to measure the length of some nails, then arrange them from the longest to the shorte

Measure the length of each line in cm and in mm.
Complete the table, then create the two line plots.

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

____ cm, ____ mm

| Line | Red | Black | Green | Violet | Yellow | Gray | Blue | Orange |
|---|---|---|---|---|---|---|---|---|
| Length in cm | | | | | | | | |
| Length in mm | | | | | | | | |

Lines lengths in cm

Lengths in cm

Key Each X stands for one line

Lines lengths in mm

Lengths in mm

Key Each X stands for one line

• Let your child compare the two line plots, to deduce that the two line plots are the same.

Measure the lengths of insects. Complete the table, then create a line plot for these data.



_____ millimeter



_____ millimeter



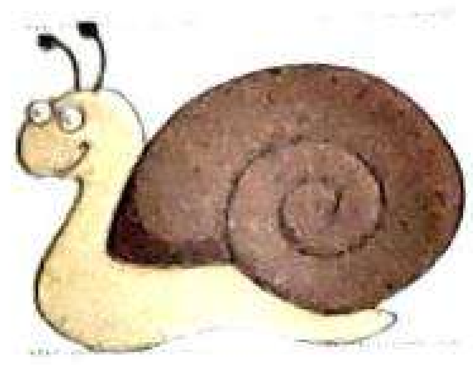
_____ millimeter



_____ millimeter



_____ millimeter



_____ millimeter



_____ millimeter



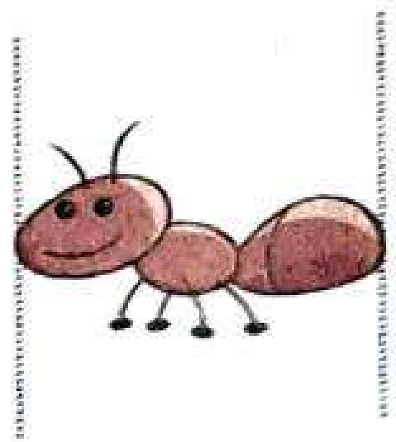
_____ millimeter



_____ millimeter



_____ millimeter



_____ millimeter



_____ millimeter

| Length in mm | Number of insects |
| --- | --- |
| 16 | |
| 17 | |
| 18 | |
| 19 | |
| 20 | |

_______________




Key Each X represents one insect.



**Notes for parents**

• Ask your child to guess the length of a pin, then ask him/her to use a ruler to measure its length.

Use your ruler to measure the length of pinkie nail (little finger) of each of your classmates.

**Fill in the table, then complete the pictograph.**



| Length of pinkie nail | | |
|---|---|---|
| **Length** | **Tally** | **Number** |
| 5 mm | | ______ |
| 6 mm | | ______ |
| 7 mm | | ______ |
| 8 mm | | ______ |
| 9 mm | | ______ |

| Length of pinkie nail | |
|---|---|
| 5 mm | |
| 6 mm | |
| 7 mm | |
| 8 mm | |
| 9 mm | |

**Key** 😊 = 2 students ◗ = 1 student

## Challenge

- Mention an item at home is about 15 mm in length.
  Then measure its length.

| Item | Length |
|---|---|
| ______ | ______ |

- **Your estimation (choose) :**

accepted not accepted

• Help your child to use a measuring tape to measure his/her wrist.

Place a smiley face

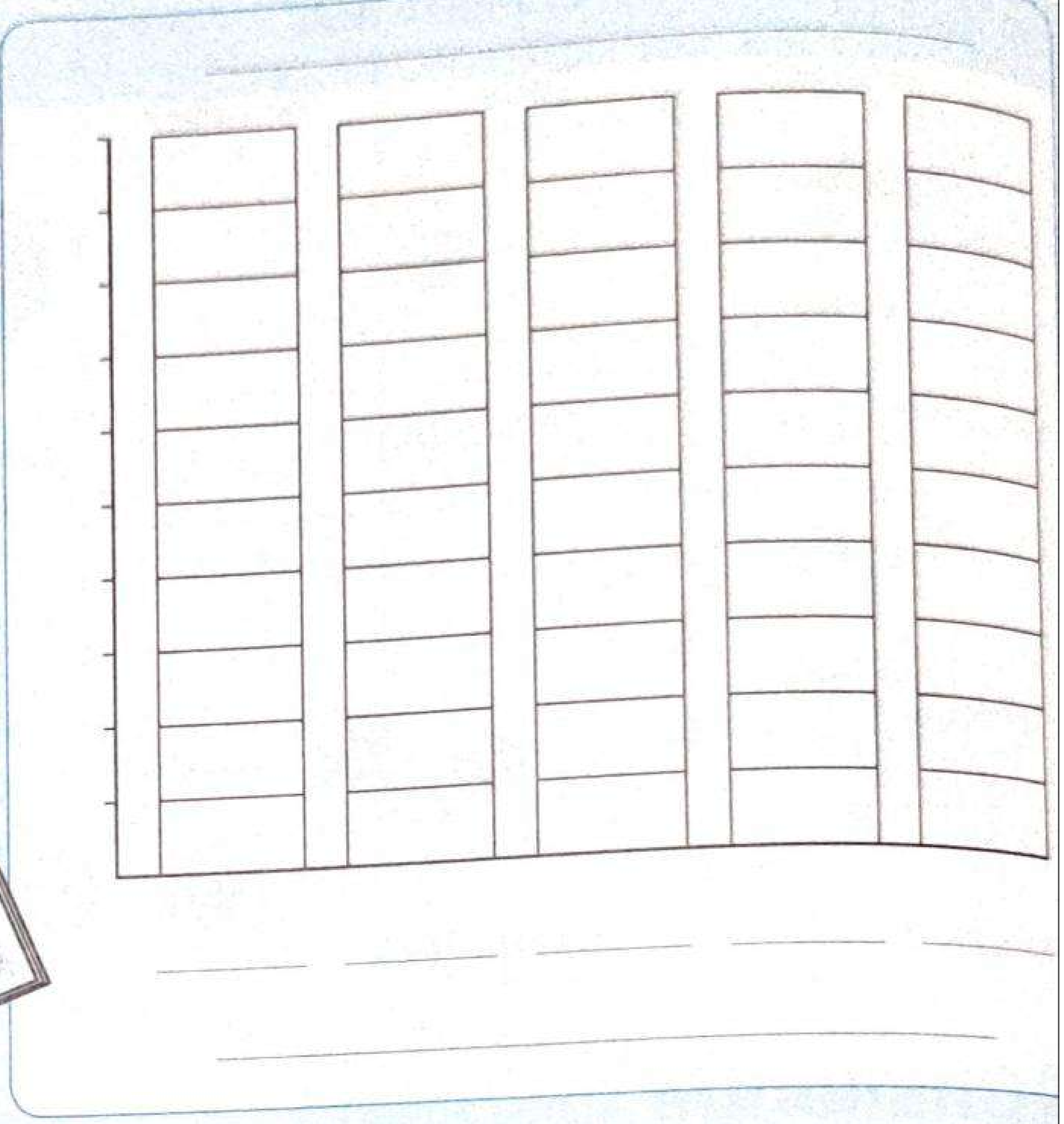
# Activity

## Chapter 1

**Make a survey.**

Ask 15 classmates about their favorite pets.
Then make a tally table to show their choices and represent it in a bar graph.

| Favorite pets | | |
|---|---|---|
| **Pet** | **Tally** | **Number** |
| Cat | | ____ |
| Dog | | ____ |
| Fish | | ____ |
| Parrot | | ____ |
| Hamster | | ____ |





**Answer :**

- Which pet is favored by the most classmates ?

  ______________

- Which pet is favored by the least classmates ?

  ______________

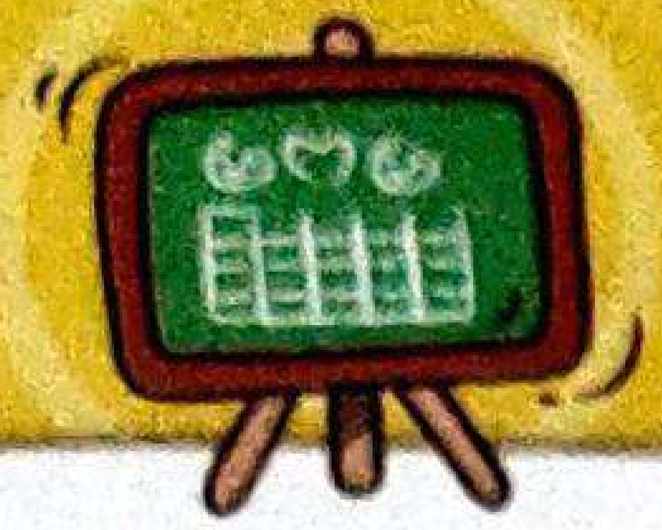
- How many classmates liked dog best ?

  ______________

- How many classmates liked both cat and fish ?

  ______________

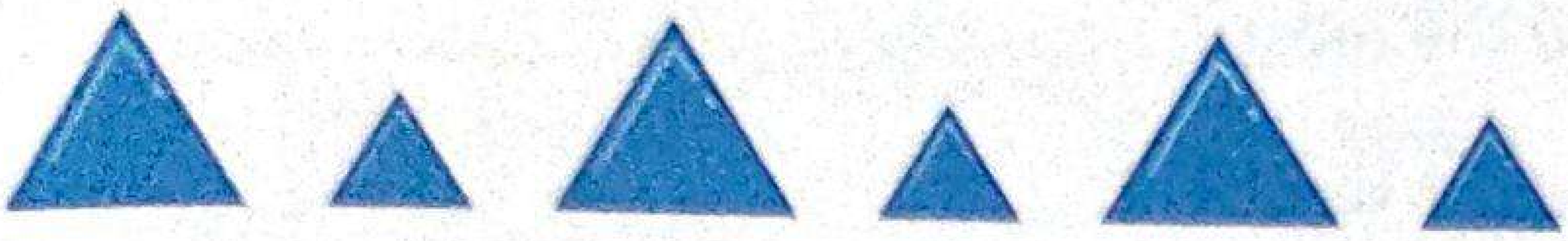


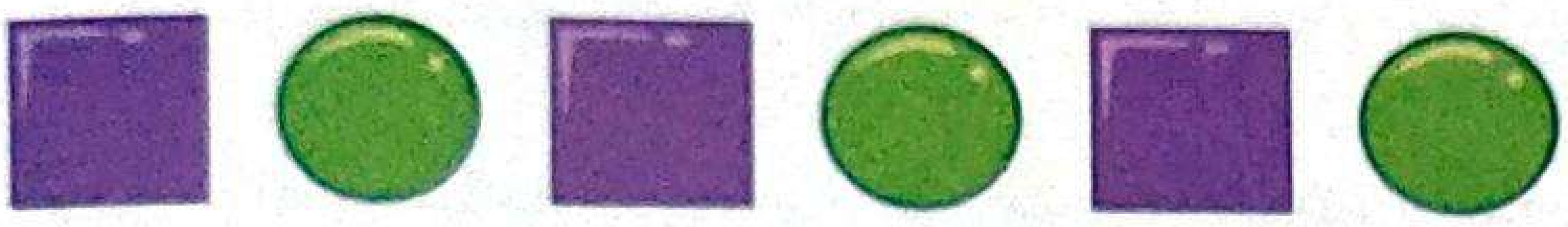


# Extra Practice



**1** Extend the pattern.

 ____ ____

 ____ ____



**2** Find the rule. Complete the pattern.

10 , 14 , 18 , 22 , ____ , ____

90 , 85 , 80 , 75 , ____ , ____

11 , 22 , 33 , 44 , ____ , ____

32 , 34 , 36 , 38 , ____ , ____

97 , 87 , 77 , 67 , ____ , ____

60 , 57 , 54 , 51 , ____ , ____

110 , 113 , 116 , 119 , ____ , ____

18 , 27 , 36 , 45 , ____ , ____

• In this practice your child will review on all what he/she had learned in chapter 1

**3** Complete the tally table. Then answer the questions.

- What is the number of children liked music ? ..........
- Which activity is liked the most ? ..........
- Which activity is liked the least ? ..........
- How many more children liked sports than reading ? ..........

**Favorite activity**

| Activity | Tally | Number |
|---|---|---|
| Art | IIII | |
| Sports | 𝍸 II | |
| Reading | IIII | |
| Music | 𝍸 I | |

**4** This is a survey about our favorite fruit in the class.

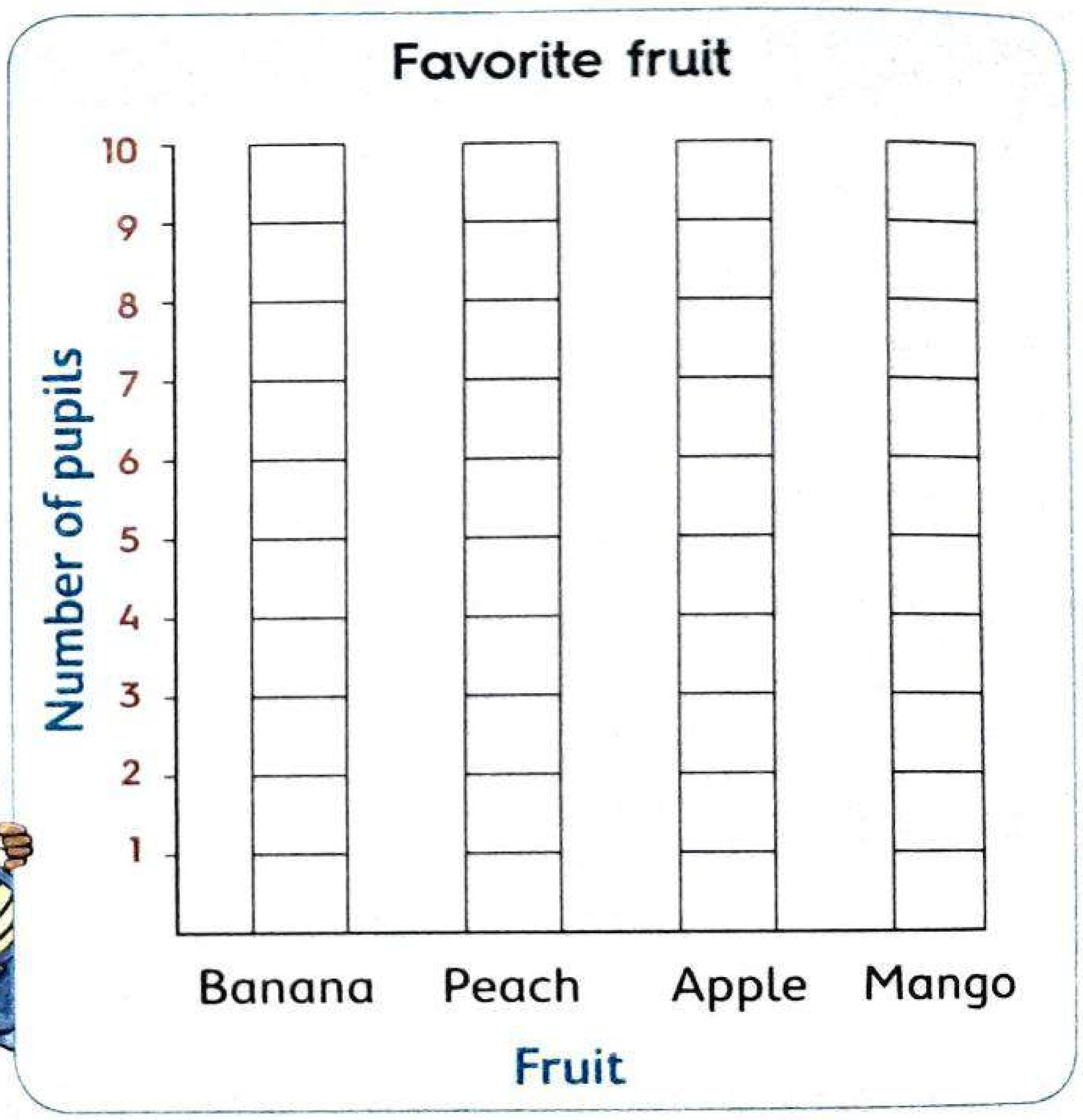
| Mango | Peach | Apple | Mango | Mango | Banana | Peach | Mango |
|---|---|---|---|---|---|---|---|
| Banana | Mango | Apple | Peach | Mango | Peach | Apple | Banana |
| Peach | Apple | Banana | Mango | Banana | Peach | Mango | Peach |

- Make a tally table and then use it to make a bar graph.

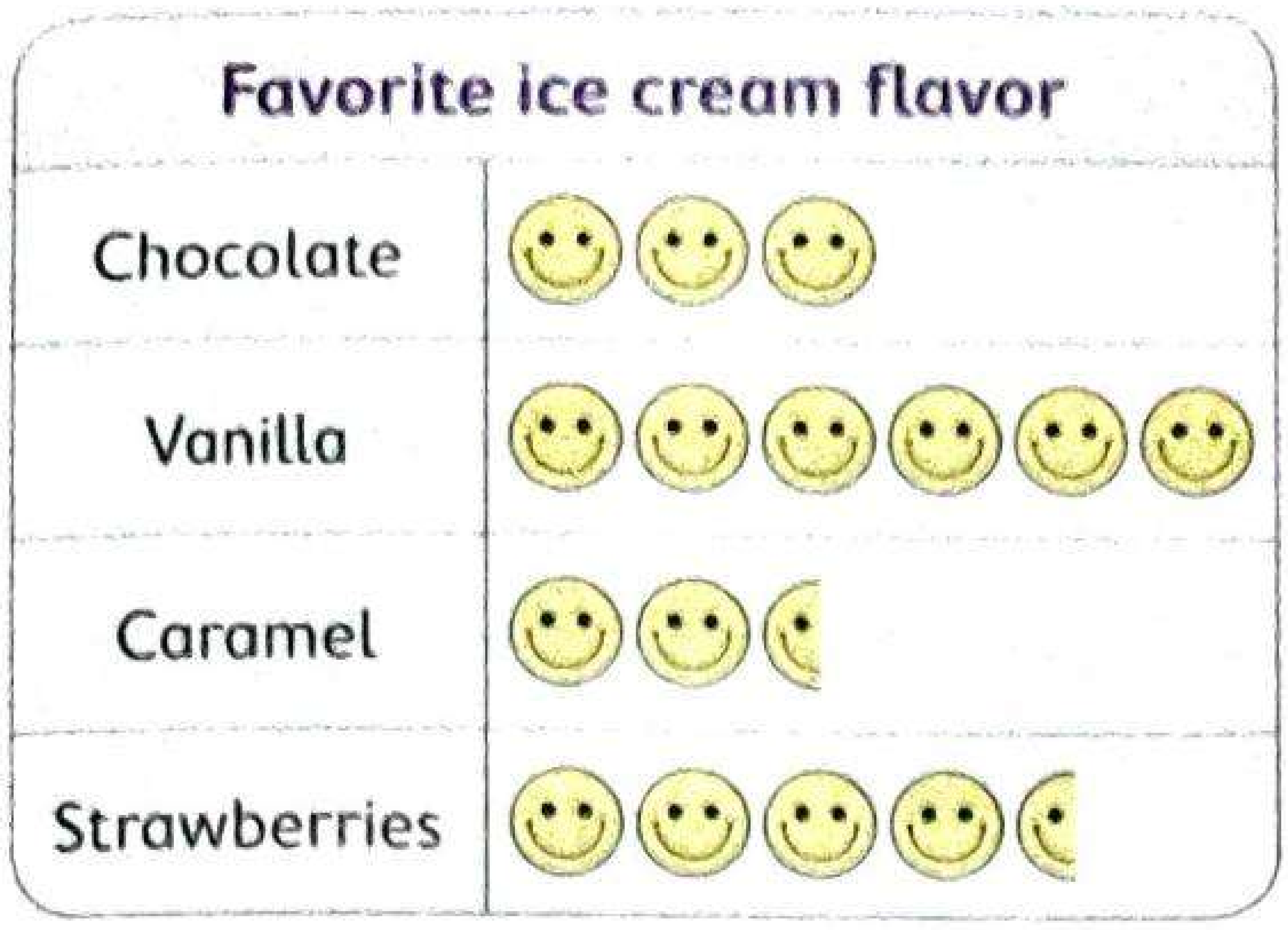
**Favorite fruit**

| Fruit | Tally | Number |
|---|---|---|
| Banana | | ...... |
| Peach | | ...... |
| Apple | | ...... |
| Mango | | ...... |





**5** Use the key in pictograph to complete the tally table.



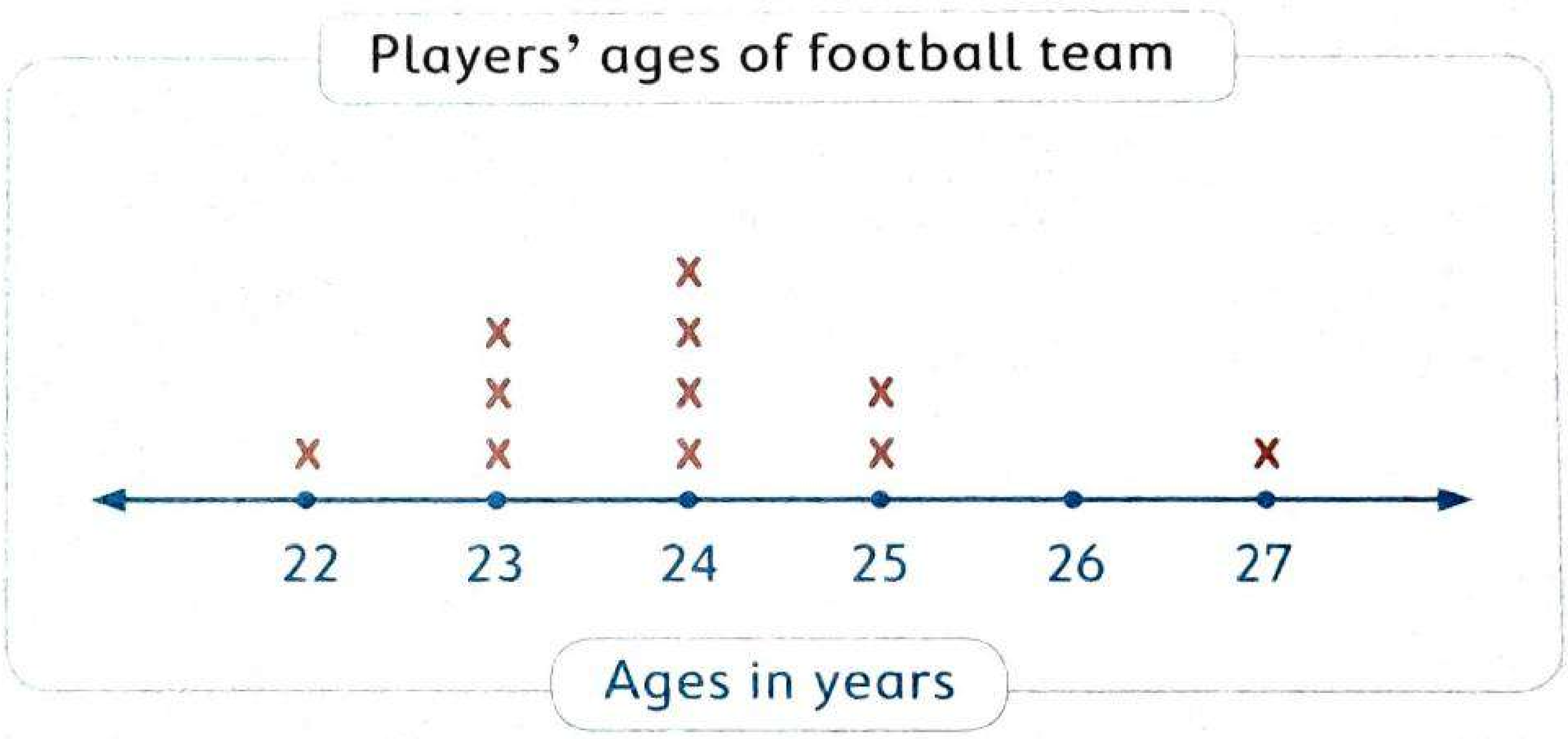

Favorite ice cream flavor

| Flavor | Tally |
|---|---|
| Chocolate | |
| Vanilla | |
| Caramel | |
| Strawberries | |



Key: (full smiley face) = 2 children, (half smiley face) = 1 child

**6** Use the line plot to answer the questions.




Key: Each X stands for one player

- How many players are 25 years old ? __________
- Which age has the greatest number of players ? __________
- How many players are younger than 24 years old ? __________
- How many players are in the football team ? __________

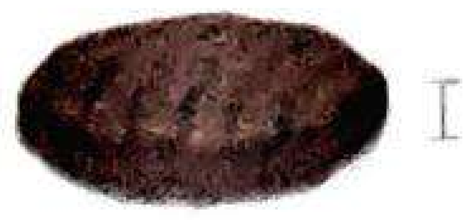
**7** **Tick ( ✓ ) the suitable unit to measure each object.**



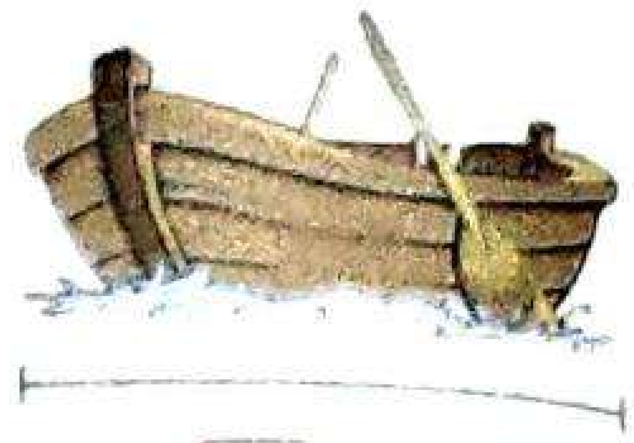
mm ☐ m ☐



mm ☐ m ☐



mm ☐ m ☐



mm ☐ m ☐

**8** **Measure the length of each pencil. Arrange the lengths from the shortest to the longest.**



________ mm



________ mm



________ mm



________ mm



________ mm

The order is : ________ , ________ , ________ , ________ , ________

**9** **Match.**

| 1 cm | 1 m | 100 mm | 11 cm |
|---|---|---|---|

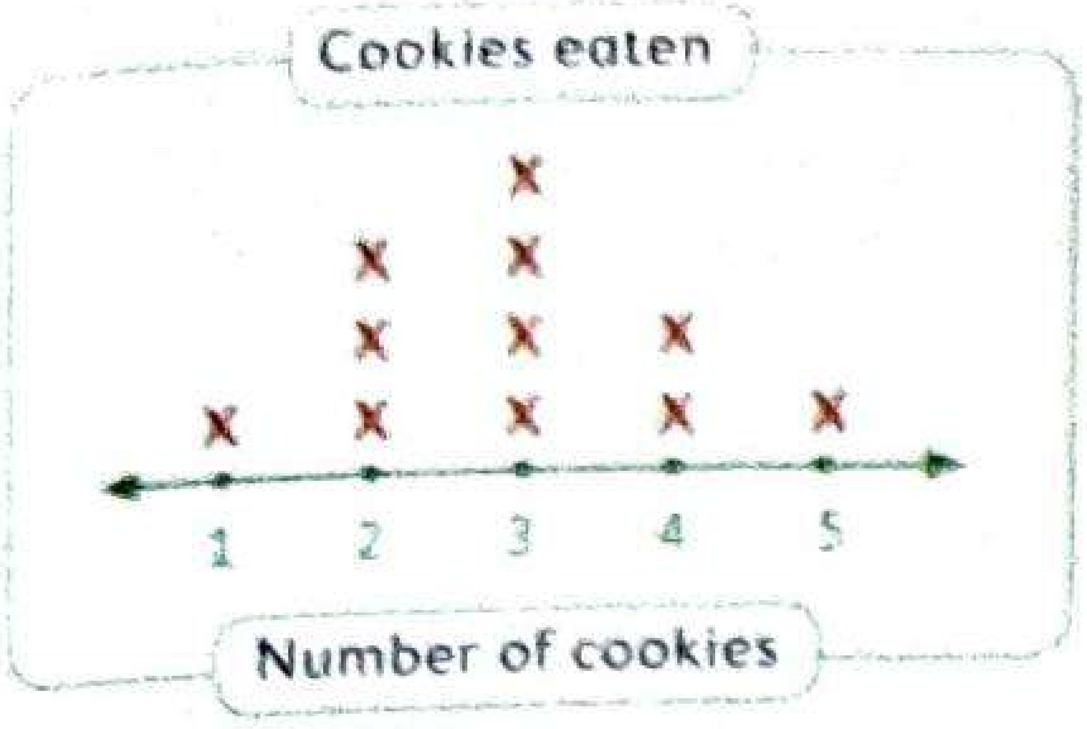
| 10 cm | 10 mm | 110 mm | 100 cm |
|---|---|---|---|

# Assessment

## Chapter 1



**1** Use the line plot. How many children ate 2 cookies ?



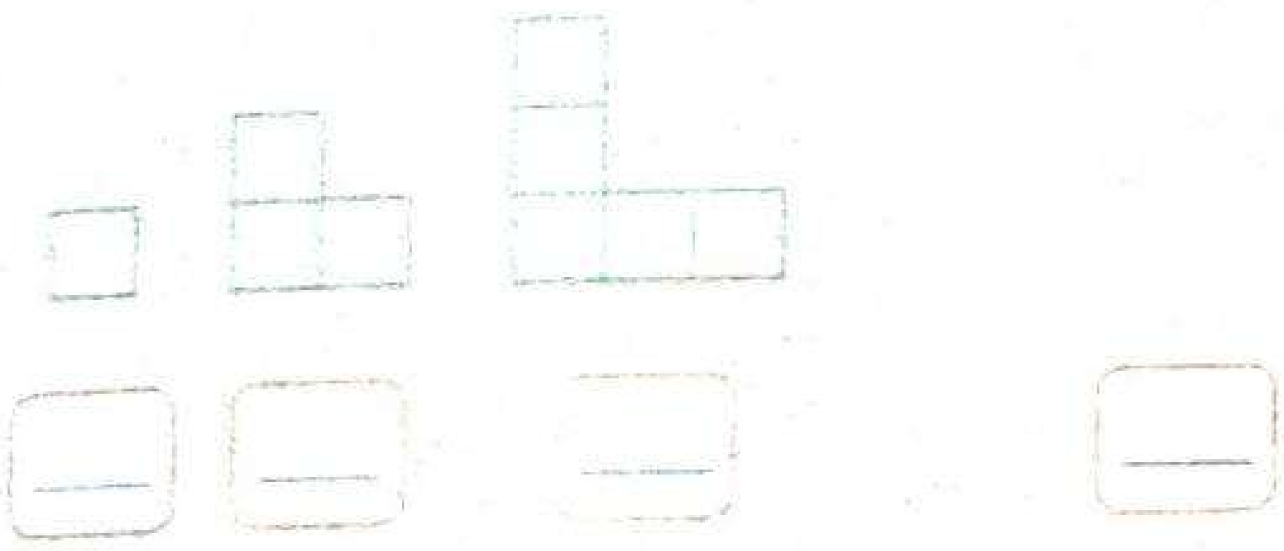

Key
Each X stands for one child.

◯ 1 ◯ 2 ◯ 3 ◯ 4

**2** Measure the length of each object.



**3** Draw what might come next in the pattern. Write the number of items in each step.



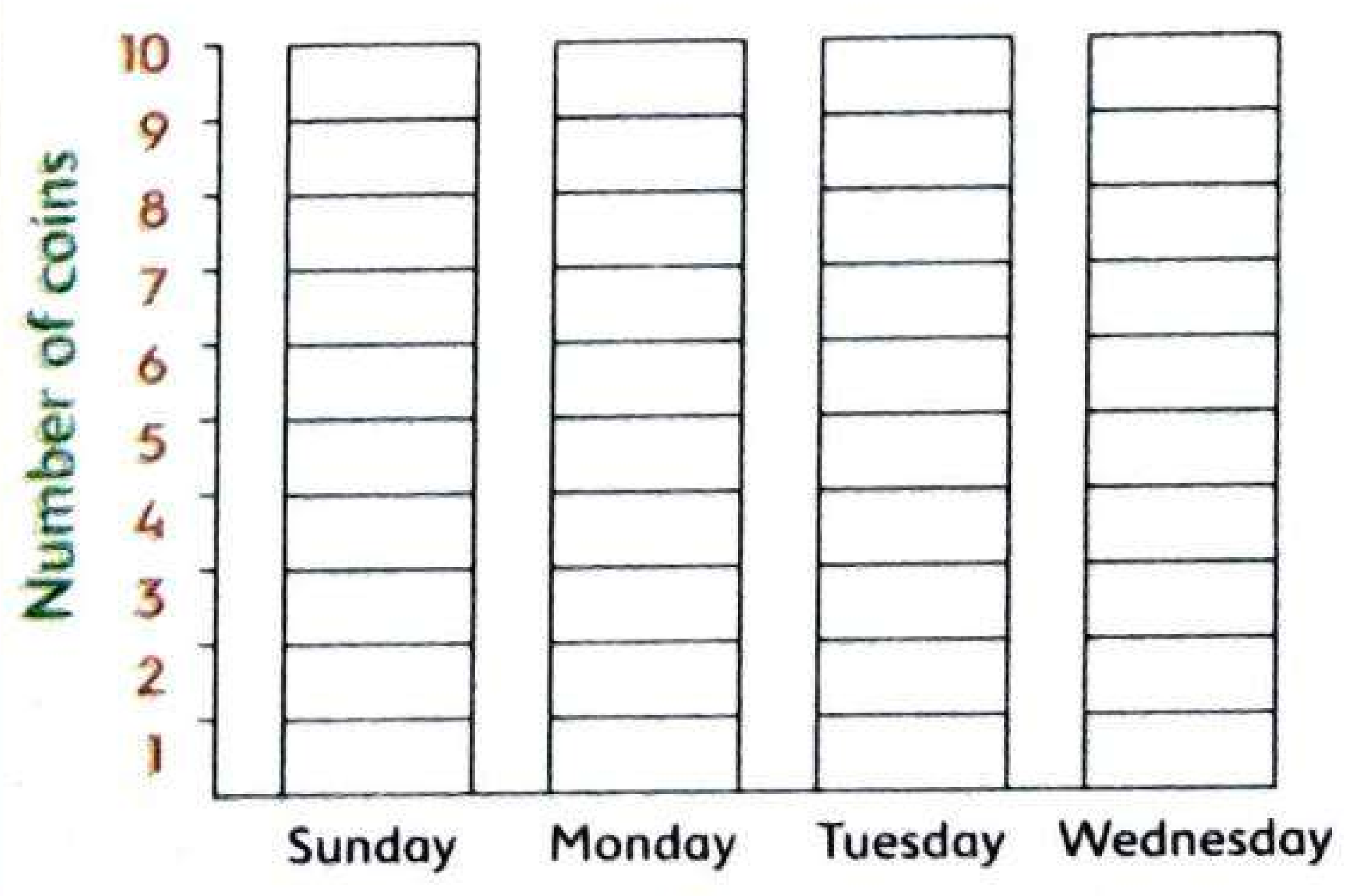
**4** Discover the rule pattern. Write the missing numbers.

| | rule |
|---|---|
| 49, 48, 47, 46 , ____ , ____ | |
| 30, 32, 34, 36 , ____ , ____ | |
| 18 , 23, 28, 33 , ____ , ____ | |

**5** Count the tallies. Write the total. Color the graph to show the data.

Saved coins

| Day | Tally | Number |
|---|---|---|
| Sunday | \|\|\| | ____ |
| Monday | 卌 | ____ |
| Tuesday | 卌 \|\|\| | ____ |
| Wednesday | 卌 \| | ____ |



# Chapter 2



## Outcomes

**At the end of chapter two, your child will be able to:**

**Lessons 11 & 12**

- Explain how the value of a digit can change based on its place value.
- Apply strategic thinking to construct a four-digit number with a high value.
- Read and write numbers up to the Thousands place in standard form.
- Read and write numbers up to the Thousands place in expanded form.
- Create visual models of numerical value.
- Compare numbers using symbols.

**Lessons 13 & 14**

- Read and write numbers up to the Hundred Thousands place.
- Compare and order numbers up to the Hundred Thousands place.
- Skip count by 2s, 3s, 5s, or 10s.
- Read and write numbers up to the Hundred Thousands place in standard form.
- Read and write numbers up to the Hundred Thousands place in expanded form.
- Order a series of numbers up to the Hundred Thousands place.

**Lessons 15 & 16**

- Identify and practise strategies for counting groups of objects.
- Use a variety of strategies to calculate the total number of items in an array.
- Solve repeated addition problems.

**Lessons 17 & 18**

- Use drawings, arrays, equations, and physical models to solve repeated addition and multiplication problems.
- Express repeated addition problems as multiplication problems.
- Compare arrays to equal groups.
- Explain how repeated addition and multiplication equations are related.
- Explain products of whole numbers.
- Compare two products using greater than, less than, and equal to symbols.

**Lessons 19 & 20**

- Solve multiplication problems using arrays.
- Investigate the Commutative Property of Multiplication using arrays.
- Create arrays to model the Commutative Property of Multiplication.
- Explain multiplication and the Commutative Property of Multiplication.
- Think strategically to solve a mathematical problem.
- Use arrays to solve a real-world problem.

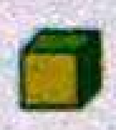
## Key vocabulary

- Digit
- Hundred thousands
- Less than
- Sets
- Repeated addition
- Total
- Place value
- Expanded form
- Equal
- Array
- Multiplication
- Commutative Property
- Thousand
- Standard form
- Skip counting
- Rows
- Product
- Ten thousands
- Greater than
- Groups
- Columns
- Factor

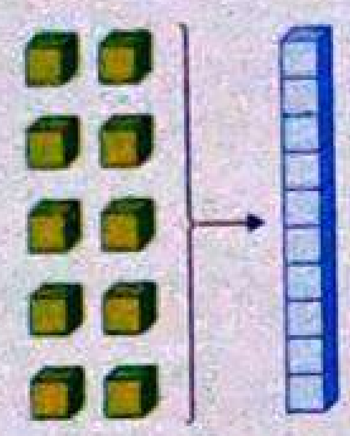
Lessons **11 & 12**

# Thousands

## Pre-study Thousands

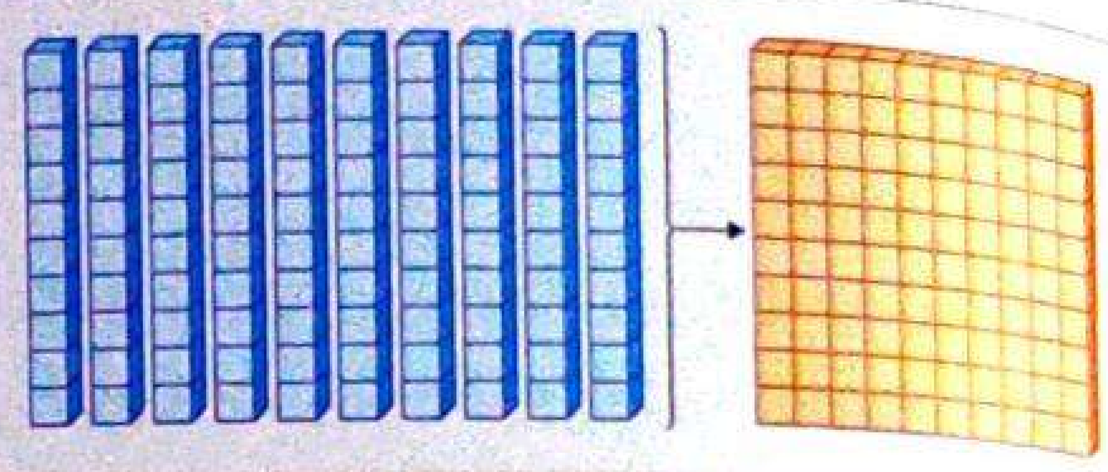


One



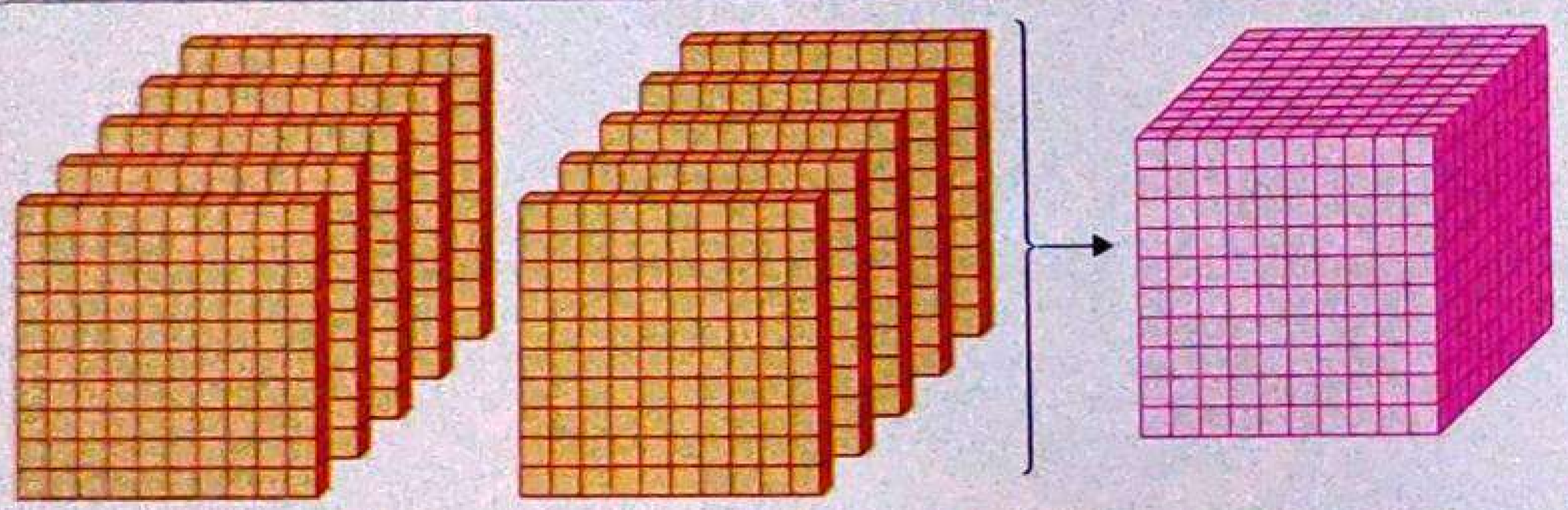
One ten

10 = 10 ones



One hundred

100 = 10 tens



One thousand

1,000 = 10 hundreds
= 100 tens
= 1,000 ones

*Math tip*

*A comma (,) is used to separate the thousands and the hundreds.*



*Did you know?*

*1,000 is the smallest 4-digit number.*

## Check

**Complete.**

3,000 = ______ thousands

5,000 = ______ thousands

______ = 6 thousands

______ = 700 tens

2,000 = ______ tens

1,000 = ______ ones

______ = 8,000 ones

4 thousands = ______ tens

600 tens = ______ hundreds

20 hundreds = ______ thousands

**Notes for parents**

- Let your child know another way to find one thousand is adding one to 999 ones (999 + 1 = 1,0

# Learn Place value

**How do you write and read 4-digit numbers ?**

> *Vocabulary*
> Place value
> the value given to a digit depends on its place in a number.

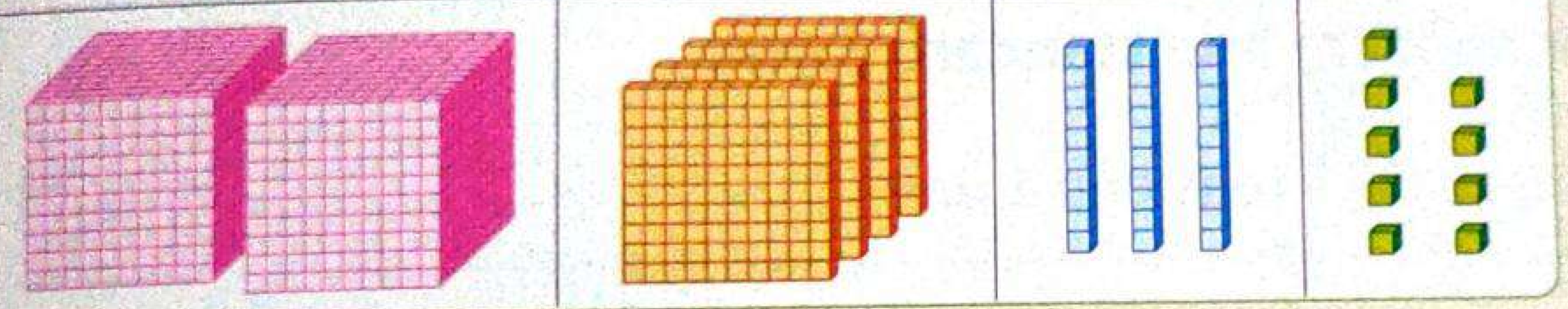
- Place value chart :

2,439

| Thousands | Hundreds | Tens | Ones |
|---|---|---|---|
| 2 | 4 | 3 | 9 |
| 2 thousands | 4 hundreds | 3 tens | 9 ones |
| 2,000 | 400 | 30 | 9 |

- Place value mat :

| Thousands | Hundreds | Tens | Ones |
|---|---|---|---|



> *Math tip*
> The expanded form is adding the value of each digit in the number



Standard form : 2, 4 3 9

Expanded form : 2,000 + 400 + 30 + 9

Word form : Two thousand, four hundred thirty-nine

# Check

**Complete.**

| Number | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| 5,839 | 5 | 8 | 3 | 9 |
| 7,256 | | | | |
| 2,103 | | | | |
| 4,360 | | | | |
| 5,018 | | | | |

• Ask your child to write in a blank paper another way to write the number in the practice in this page.

## Practice

Write in standard form.

2,000 + 600 + 30 + 4 = ..........

4,000 + 500 + 90 + 3 = ..........

20 + 1 + 6,000 = ..........

600 + 7,000 + 50 = ..........

1,000 + 900 = ..........

1 + 70 + 800 + 6,000 = ..........

3,000 + 300 + 9 = ..........

10 + 100 + 1,000 = ..........

5 + 9,000 = ..........

5,000 + 40 = ..........

Write in expanded form and standard form.

8 thousands , 4 hundreds , 9 tens and 1 one

[ + + + ] = [ ]

2 thousands , 1 hundred , 7 tens and 5 ones

[ + + + ] = [ ]

7 ones , 5 hundreds , 3 thousands and 2 tens

[ + + + ] = [ ]

9 thousands , 7 hundreds and 2 ones

[ + + ] = [ ]

1 thousand , and 48 ones

[ + + ] = [ ]

**Challenge :** What does 23 hundreds and 19 ones equal ? ..........

**Notes for parents**

- Help your child to use the expanded form as a way to read the number for example : ( 2,000 + 600 + 30 + 4) is read as two thousands, six hundred thirty-four.

## Write the missing numbers.

2,753 = ______ + 700 + 50 + 3

______ = 3,000 + 3

4,925 = 4,000 + 900 + ______ + ______

6,040 = 6,000 + ______

9,462 = 9,000 + ______ + 60 + 2

7,777 = 7 + ______ + ______ + ______

3,781 = 1 + ______ + 700 + ______

4,506 = ______ + 500 + ______



## Write the following in standard form.

Five thousand, three hundred seventy-eight ☐

Two thousand, five hundred thirty-one ☐

Nine thousand, four hundred six ☐

One thousand , fifty-four ☐

Three thousand , two ☐

• Ask your child to choose any number from this page and write it in another way.

## Circle the correct digit in the number according to its place.

| | | |
|---|---|---|
| Ones | 8,191 | Thousands |
| Hundreds | 1,243 | Tens |
| Tens | 9,701 | Hundreds |
| Thousands | 1,003 | Ones |

## Circle the value of the red digit.

**3,791**

3,000 300 30 3

**5,129**

9,000 900 90 9

**1,034**

0 10 100 1,000

**4,182**

4,000 400 40

**8,063**

6,000 600 60

**7,107**

1 10 100

## Write the place value and the value of the colored digit.

| | place value | value |
|---|---|---|
| 3,791 | | |
| 4,182 | | |
| 5,629 | | |
| 7,107 | | |
| 5,431 | | |

| | place value |
|---|---|
| 6,129 | |
| 8,063 | |
| 1,034 | |
| 2,560 | |
| 9,287 | |

**Notes for parents**

- Let your child remember that : the value of each digit in any number depends on its place in this

## Learn Greatest and least 4-digit number

**Create the greatest and the least 4-digit number.**



The digits are 4 , 5 , 9 , 1

To create the greatest 4-digit number from given digits, arrange the digits from greatest to least.

**The order is :** 9 5 4 1

**So,** the greatest number is : **9,541**

To create the least 4-digit number from given digits, arrange the digits from least to greatest.

**The order is :** 1 4 5 9

**So,** the least number is : **1,459**

## Practice

**Write the greatest and the least 4-digit number from the given digits. The first one is done for you.**

**Hint :**

Do not put the 0 digit in the highest place value. It will be 3 - digit number.

| Digits | greatest | least |
|---|---|---|
| 6 7 0 1 | 7,610 | 1,067 |
| 4 3 9 8 | | |
| 3 0 2 7 | | |
| 5 2 3 4 | | |
| 5 1 6 8 | | |
| 4 4 7 5 | | |
| 0 3 4 9 | | |

* Ask your child to explore the greatest 4-digit number. (he /she should answer : 9,999).

## Learn Comparing 4-digit numbers

**How do you compare 4-digit numbers ?**

**Compare 2,349 and 2,617.**




When comparing numbers, the number which has mor number of digit is the greater. 5843 > 798

**Step 1**

Begin at the left. Compare.

2,349
2,617 } Both numbers have 2 thousands.

**Step 2**

Find the first place where the digits are different. Compare

2,349
2,617 } 3 hundreds is less than 6 hundreds.

So, 2,349 < 2,617

or 2,617 > 2,349

## Practice

Compare, write > , < or =

3,291 ◯ 3,591

2,459 ◯ 4,378

711 ◯ 7,110

5,709 ◯ 5,704

5,148 ◯ 4,185

6,450 ◯ 6,540

2,691 ◯ 948

4,515 ◯ 4,531

8,651 ◯ 1 + 50 + 600 + 8,000

9,205 ◯ Nine thousand, two hundred fifty.

5,168 ◯ 5 thousands, 1 hundred , 6 tens and 7 ones.

## Challenge :

Circle the greatest number of the following : 6,509 6,950 6,590

**Notes for parents**

- Ask your child to tell you a number greater than 4,321 and another number less than 8,765.

## Learn Ordering 4-digit numbers ascendingly

**Put the numbers in order from least to greatest.**

| 1,720 | 3,995 | 1,564 | 2,640 | 3,965 |
|---|---|---|---|---|

1. Compare the thousands digits.

| 1,720 | 1,564 | 2,640 | 3,995 | 3,965 |
|---|---|---|---|---|

2. If the thousands digits are the same, compare the hundreds digits.

| 1,564 | 1,720 | 2,640 | 3,995 | 3,965 |
|---|---|---|---|---|

3. If the hundreds digits are the same, compare the tens digits.

| 1,564 | 1,720 | 2,640 | 3,965 | 3,995 |
|---|---|---|---|---|

## Practice

**Write the numbers in order from least to greatest.**

| 6,987 | 6,978 | 7,896 | 987 |
|---|---|---|---|

The order is : ............, ............, ............, ............

| 4,782 | 3,521 | 9,835 | 5,336 |
|---|---|---|---|

The order is : ............, ............, ............, ............

| 1,281 | 993 | 4,621 | 6,170 | 2,990 |
|---|---|---|---|---|

The order is : ............, ............, ............, ............, ............

| 4,279 | 7,942 | 784 | 4,278 | 7,249 |
|---|---|---|---|---|

The order is : ............, ............, ............, ............, ............

• Help your child to know that : 3-digit number is less than 4-digit number.

## Learn Ordering 4-digit numbers descendingly

**Put the numbers in order from greatest to least.**

| 3,840 | 7,538 | 6,514 | 3,842 | 6,925 |
|---|---|---|---|---|

1. Compare the thousands digits.

| 7,538 | 6,514 | 6,925 | 3,840 | 3,842 |
|---|---|---|---|---|

2. If the thousands digits are the same, compare the hundreds digits.

| 7,538 | 6,925 | 6,514 | 3,840 | 3,842 |
|---|---|---|---|---|

3. If the thousands digits, the hundreds digits, the tens digits are the same, compare the ones digits.

| 7,538 | 6,925 | 6,514 | 3,842 | 3,840 |
|---|---|---|---|---|

## Practice

**Write the numbers in order from greatest to least.**

| 5,300 | 1,050 | 1,500 | 3,805 |
|---|---|---|---|

The order is : ________ , ________ , ________ , ________

| 7,321 | 941 | 6,541 | 9,541 |
|---|---|---|---|

The order is : ________ , ________ , ________ , ________

| 456 | 1,938 | 2,605 | 5,719 | 3,010 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

| 5,441 | 6,204 | 2,917 | 708 | 3,009 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

**Notes for parents**

• Help your child to know that : 4-digit number is greater than 3-digit number.

Lessons 13 & 14

# Ten thousands and hundred thousands

## Learn 5-digit and 6-digit numbers

**How do you write and read 5-digit numbers ?**

- Place value chart :

53,167

| Ten thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|
| 5 | 3 | 1 | 6 | 7 |

or

| 5 ten thousands | 3 thousands | 1 hundred | 6 tens | 7 ones |
|---|---|---|---|---|
| 50,000 | 3,000 | 100 | 60 | 7 |

Standard form : 5 3, 1 6 7

Expanded form : 50,000 + 3,000 + 100 + 60 + 7

Word form : Fifty-three thousand, one hundred sixty-seven

*Put a comma between the thousands place and the hundreds place.*




**How do you write and read 6-digit numbers ?**

- Place value chart :

265,814

| Hundred thousands | Ten thousands | Thousands | Hundreds | Tens | Ones |
|---|---|---|---|---|---|
| 2 | 6 | 5 | 8 | 1 | 4 |

or

| 2 hundred thousands | 6 ten thousands | 5 thousands | 8 hundreds | 1 ten | 4 ones |
|---|---|---|---|---|---|
| 200,000 | 60,000 | 5,000 | 800 | 10 | 4 |

Standard form : 2 6 5, 8 1 4

Expanded form : 200,000 + 60,000 + 5,000 + 800 + 10 + 4

Word form : Two hundred sixty-five thousand, eight hundred fourteen

- Let your child discover what is the result of adding 1 to 9,999 (10,000) and adding 1 to 99,999 (100,000)

## Practice

**Write in standard form.**

30,000 + 9,000 + 400 + 10 + 5 = ..........

700,000 + 50,000 + 6,000 + 300 + 70 + 1 = ..........

60,000 + 8,000 + 90 + 2 = ..........

8 + 20 + 900 + 300,000 = ..........

200,000 + 10,000 + 564 = ..........

1 + 200 + 40 + 2,000 + 100,000 = ..........

70,000 + 500 + 90 + 3 = ..........

500,000 + 500 + 5 = ..........



**Write in expanded form.**

95,683 = .......... + .......... + .......... + .......... + ..........

543,876 = .......... + .......... + .......... + .......... + .......... + ..........

27,461 = .......... + .......... + .......... + .......... + ..........

709,436 = .......... + .......... + .......... + .......... + ..........

48,909 = .......... + .......... + .......... + ..........

230,045 = .......... + .......... + .......... + ..........

70,116 = .......... + .......... + .......... + ..........

36,001 = .......... + .......... + ..........

400,040 = .......... + ..........



**Notes for parents**

- Help your child to use the expanded form as an easy way to read the number for example : (500,000 + 40,000 + 3,000 + 800 + 70 + 6) is read as : five hundred forty - three thousands, eight hundred seventy - six.

## Write the missing numbers.

95,683 = ______ + 5,600 + 80 + 3

531,497 = ______ + 30,000 + ______ + 400 + 97

78,465 = 65 + 400 + ______ + 70,000

43,092 = 2 + 90 + ______ + 3,000

670,341 = ______ + 70,000 + 340 + ______

102,637 = ______ + ______ + 600 + 30 + 7

## Write the following in standard form.

| | |
|---|---|
| Thirty-one thousand, five hundred seventy-four | |
| Two hundred seventy-eight thousand, six hundred twenty-one | |
| Six hundred ninety thousand, three hundred five | |
| Fourteen thousand, eight hundred forty | |
| Three hundred eight thousand, ten | |

## Circle the correct digit in the number according to its place.

| | | | |
|---|---|---|---|
| Ten thousands | 65,810 | Hundred thousands | 308,001 |
| Hundred thousands | 921,348 | Hundreds | 200,720 |
| Thousands | 102,421 | Tens | 31,065 |
| Ones | 85,609 | Ten thousands | 407,105 |

• Let your child to point to any number in this page and ask him/her to write it in another way.

## Circle the value of the red digit.

**23,250**
300,000 30,000 3,000

**85,142**
800,000 80,000 8,000

**20,057**
500 50 5

**33,221**
20,000 2,000 200

**511,980**
500,000 50,000 5,000

**498,107**
900,000 90,000 9,000

**102,421**
100,00 10,000 0

**371,056**
100,000 10,000 1,000

---

## Write the place value and the value of the colored digit.

| | place value | value |
|---|---|---|
| 69,284 | | |
| 730,460 | | |
| 24,378 | | |
| 320,045 | | |
| 59,730 | | |
| 481,206 | | |
| 156,392 | | |
| 40,520 | | |
| 501,483 | | |
| 78,029 | | |

**Notes for parents**

• Help your child with the 6 places value of a 6-digit number and ask him/her to mention the highest and the lowest place value.

## Rearrange the digits to get the greatest and the least number.




*Do not put the 0 digit in the highest place value.*

| Digits | greatest | least |
|---|---|---|
| 7 3 6 2 8 | | |
| 6 2 3 8 1 4 | | |
| 7 2 1 0 9 | | |
| 2 0 3 5 6 1 | | |
| 0 7 8 0 4 | | |
| 5 9 7 0 1 3 | | |

## Compare, Write > , < or =

*Math tip*

*Counting the number of digit helps to compare numbers.*



| | | |
|---|---|---|
| 48,047 | ◯ | 49,123 |
| 322,647 | ◯ | 322,467 |
| 526,540 | ◯ | 526,550 |
| 15,000 | ◯ | 150 hundreds |
| 175,362 | ◯ | 175,290 |
| 321,054 | ◯ | 83,266 |
| 50,320 | ◯ | 50,410 |
| 7,500 hundreds | ◯ | 750 thousands |
| 99,999 | ◯ | one hundred thousand |
| 301,013 | ◯ | Three hundred one thousand , thirteen |
| 275,600 | ◯ | 200,000 + 70,000 + 5,000 + 6 |

## Challenge :

Write a number which is greater than 45,387 and having the digits : 1 2 0 9 3

- Ask your child to discover the greatest and the least 5-digit numbers (his/her answer should be : 99,999 & 10,000)
- Also the greatest and the least 6-digit numbers (his/her answer should be : 999,999 & 100,000)

Write the numbers in order from least to greatest.

11,493 | 132,567 | 9,372 | 98,505

The order is : ______ , ______ , ______ , ______

125,762 | 27,652 | 152,567 | 27,256

The order is : ______ , ______ , ______ , ______

833,322 | 833,400 | 8,339 | 83,987 | 83,986

The order is : ______ , ______ , ______ , ______ , ______

965,852 | 932,599 | 965,478 | 93,259 | 96,547

The order is : ______ , ______ , ______ , ______ , ______

24,571 | 724,072 | 4,720 | 24,270 | 724,172

The order is : ______ , ______ , ______ , ______ , ______

Write the numbers in order from greatest to least.

103,002 | 3,201 | 23,001 | 21,300

The order is : ______ , ______ , ______ , ______

11,112 | 101,559 | 59,002 | 21,052

The order is : ______ , ______ , ______ , ______

81,236 | 618,765 | 38,472 | 637,961 | 773,550

The order is : ______ , ______ , ______ , ______ , ______

914,231 | 12,605 | 9,380 | 12,606 | 914,230

The order is : ______ , ______ , ______ , ______ , ______

**Notes for parents**

- Ask your child to tell you two numbers , one is greater than and the other is less than (43,210).

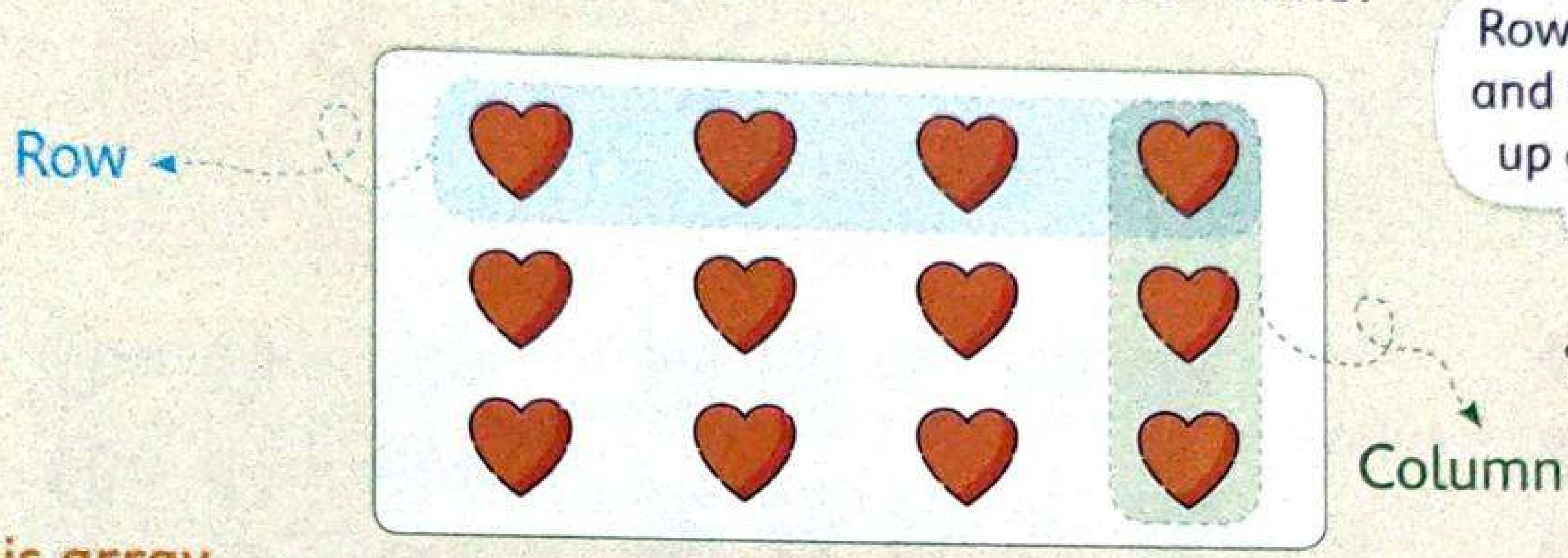
Place a smiley face

Lessons **15 & 16**

# Arrays

## Pre-study

- Arrays have horizontal rows and vertical columns.







In this array,

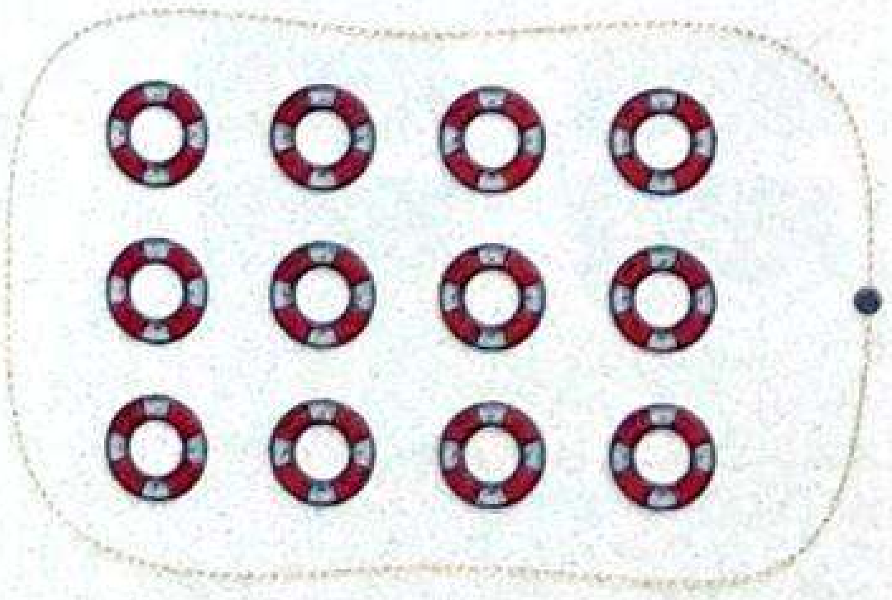
- **Number of rows : 3**
- **Number of columns : 4**

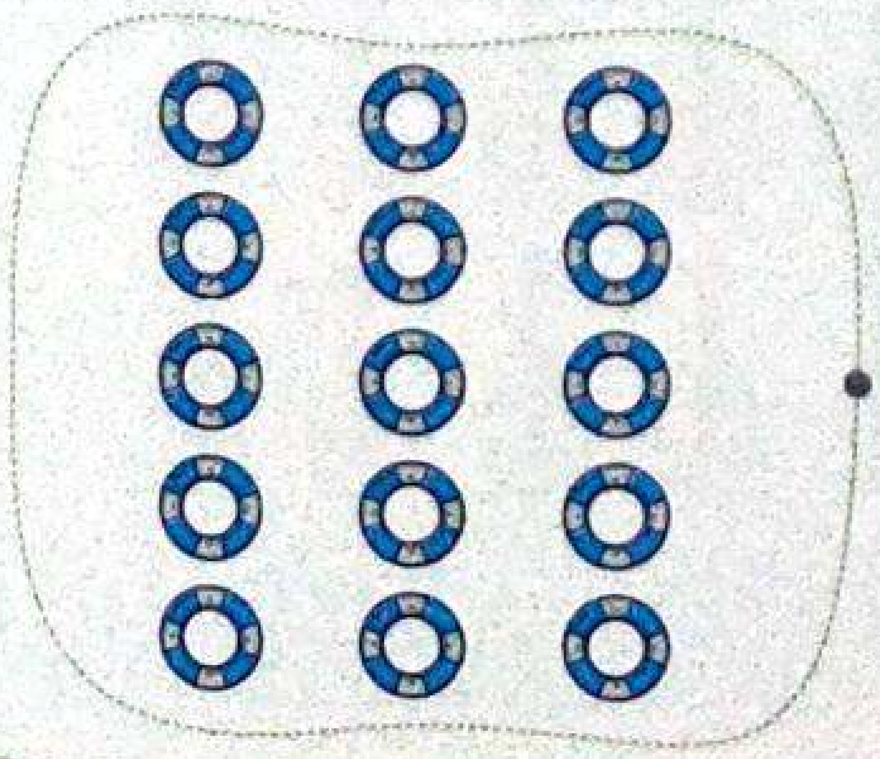
You can write :

**3 rows of 4** or **4 columns of 3**

## Check

**Look at each array, match each array to its way to count.**



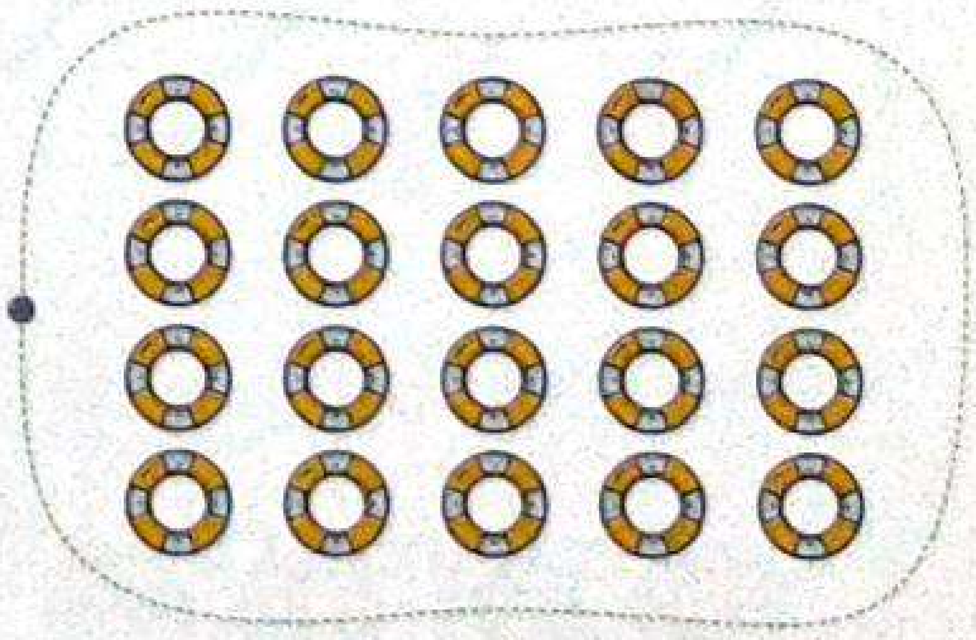


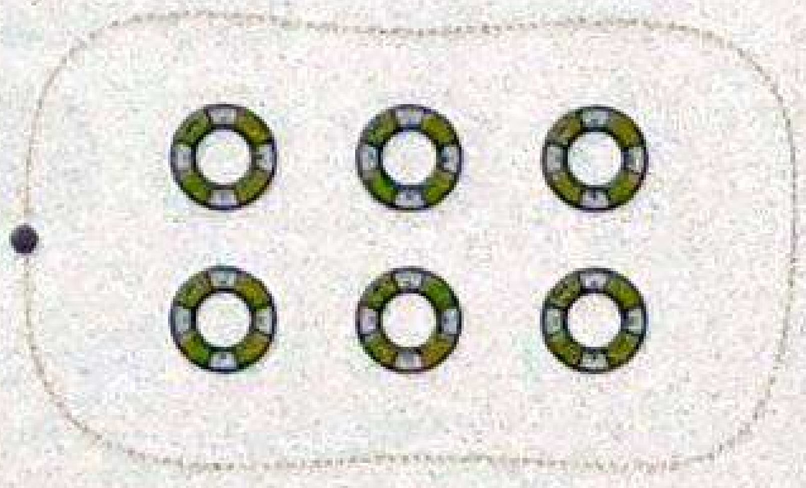
2 rows of 3

3 columns of 5

4 rows of 5

4 columns of 3





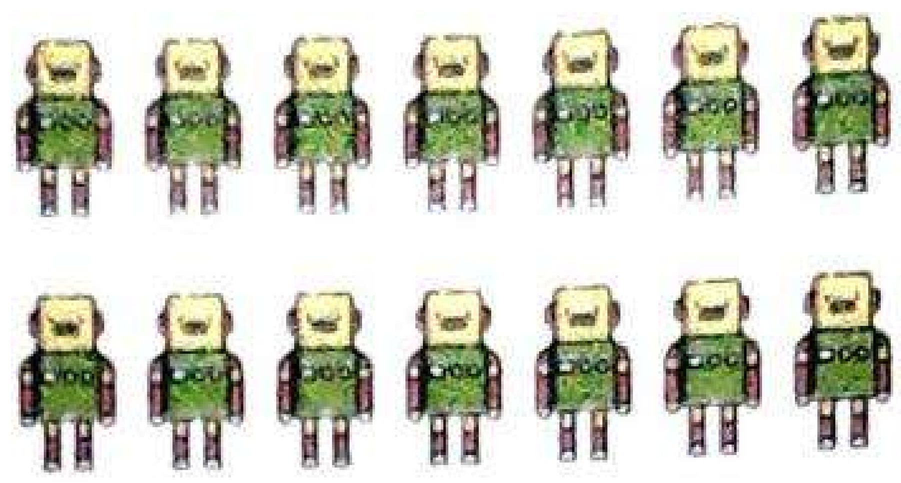
- Practice your child to count the rows and columns in each array.

# Practice

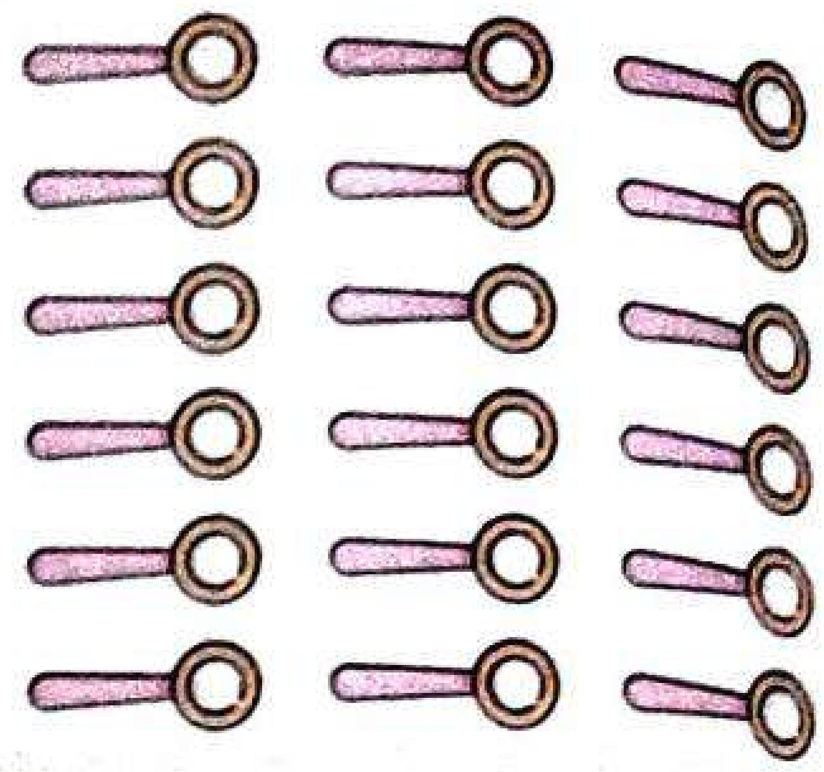
Complete the following.



_____ rows of _____



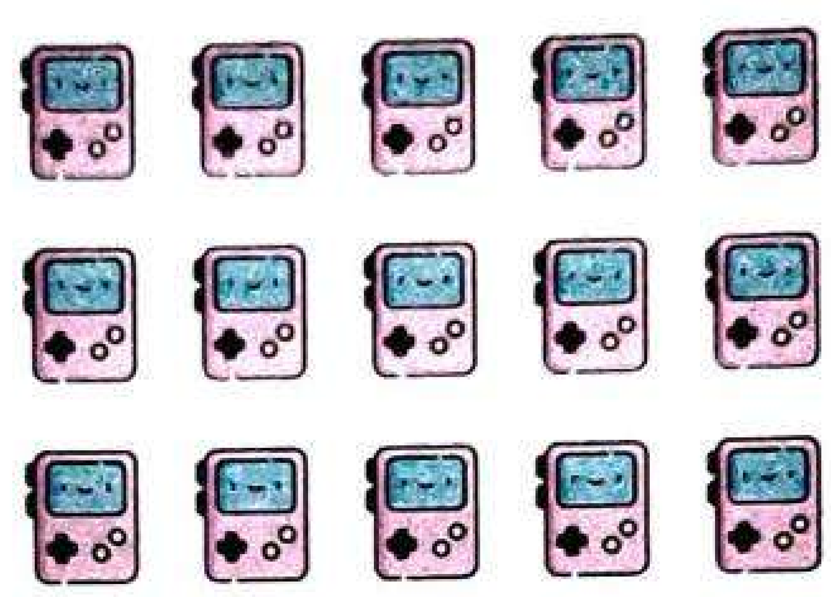
_____ rows of _____



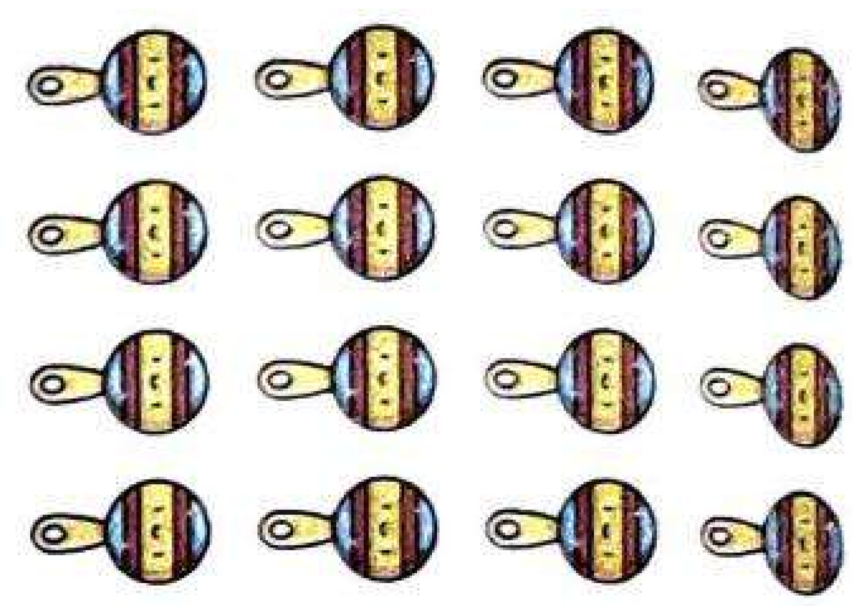
_____ rows of _____



_____ column of _____



_____ columns of _____



_____ columns of _____

Create an array.

| 2 rows of 3 | 4 rows of 2 | 1 row of 6 |
|---|---|---|
| | | |

| 1 column of 5 | 3 columns of 4 | 7 columns of 2 |
|---|---|---|
| | | |

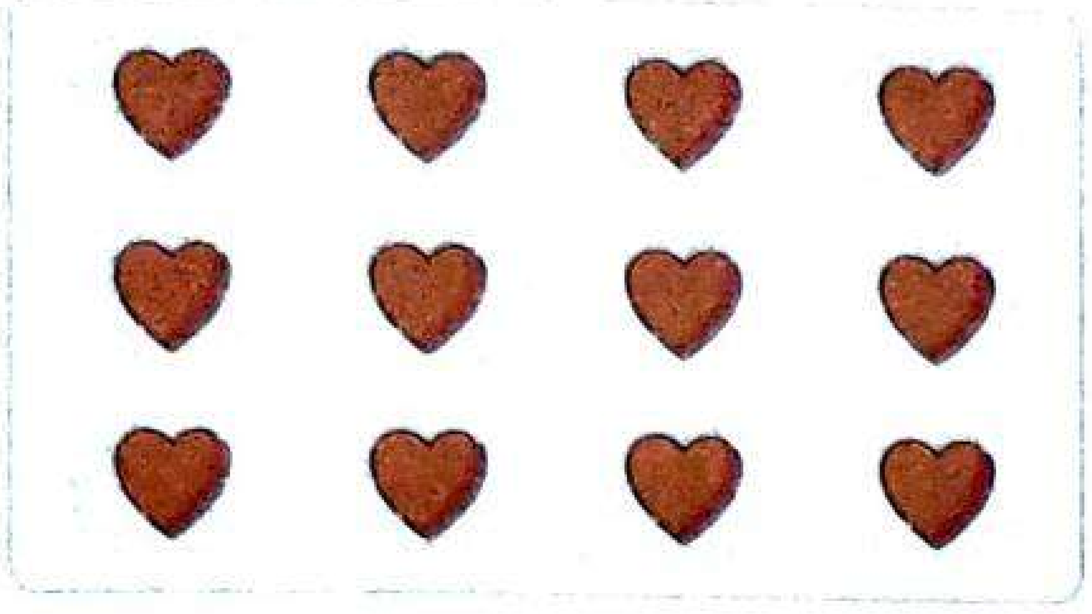
**Notes for parents**

- Remined your child that rows are horizontal and go across but columns are vertical and go up and dow

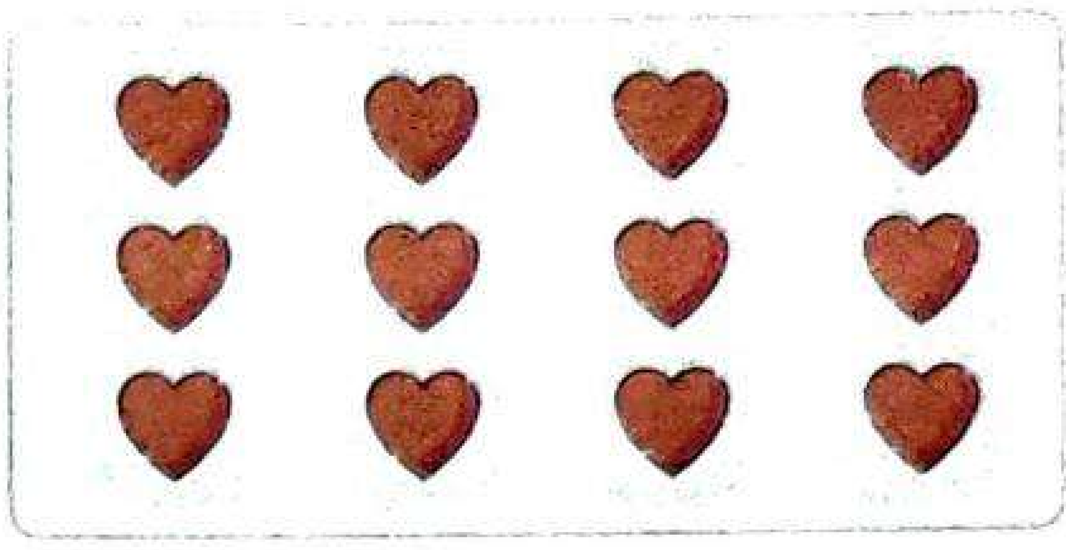
## Learn Skip counting to find the total number of array

To find the total number of objects in an array use skip counting instead of counting the all objects.





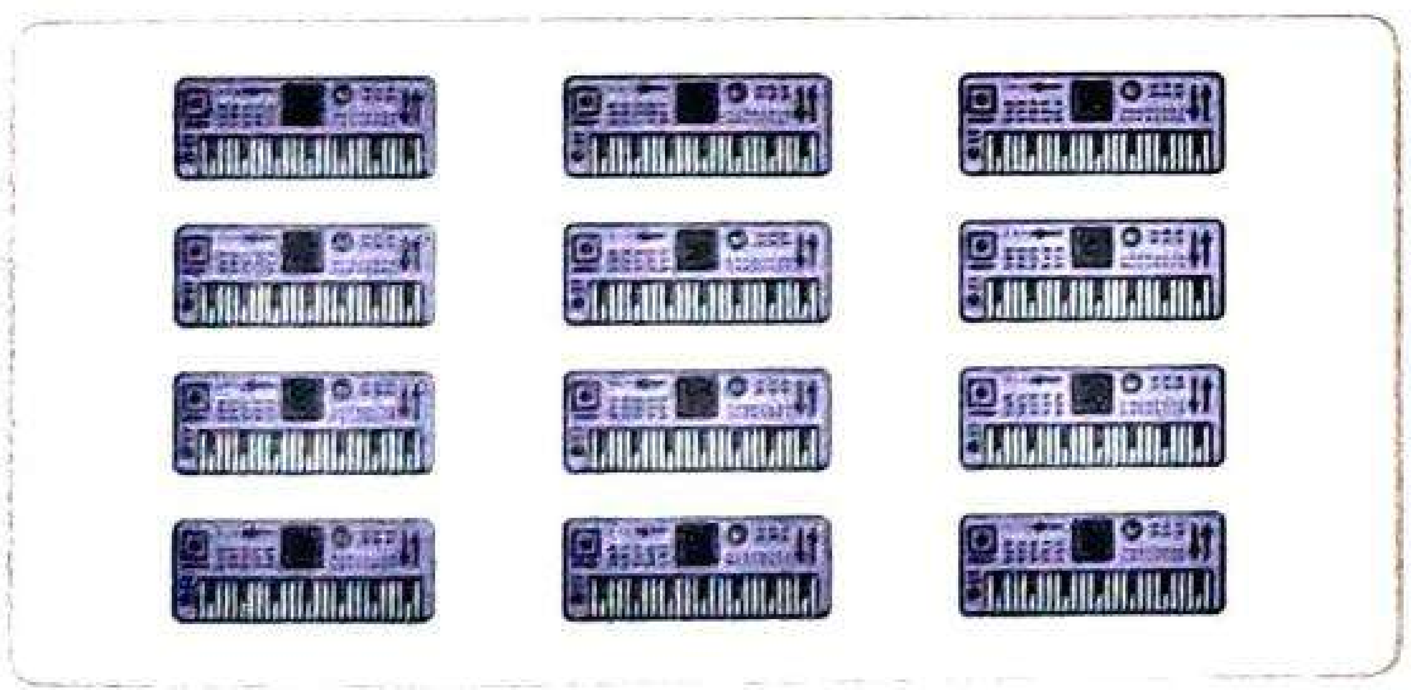
- This array has 3 rows of 4 hearts.
- Skip counting by 4s three times : 4 , 8 , 12 hearts.



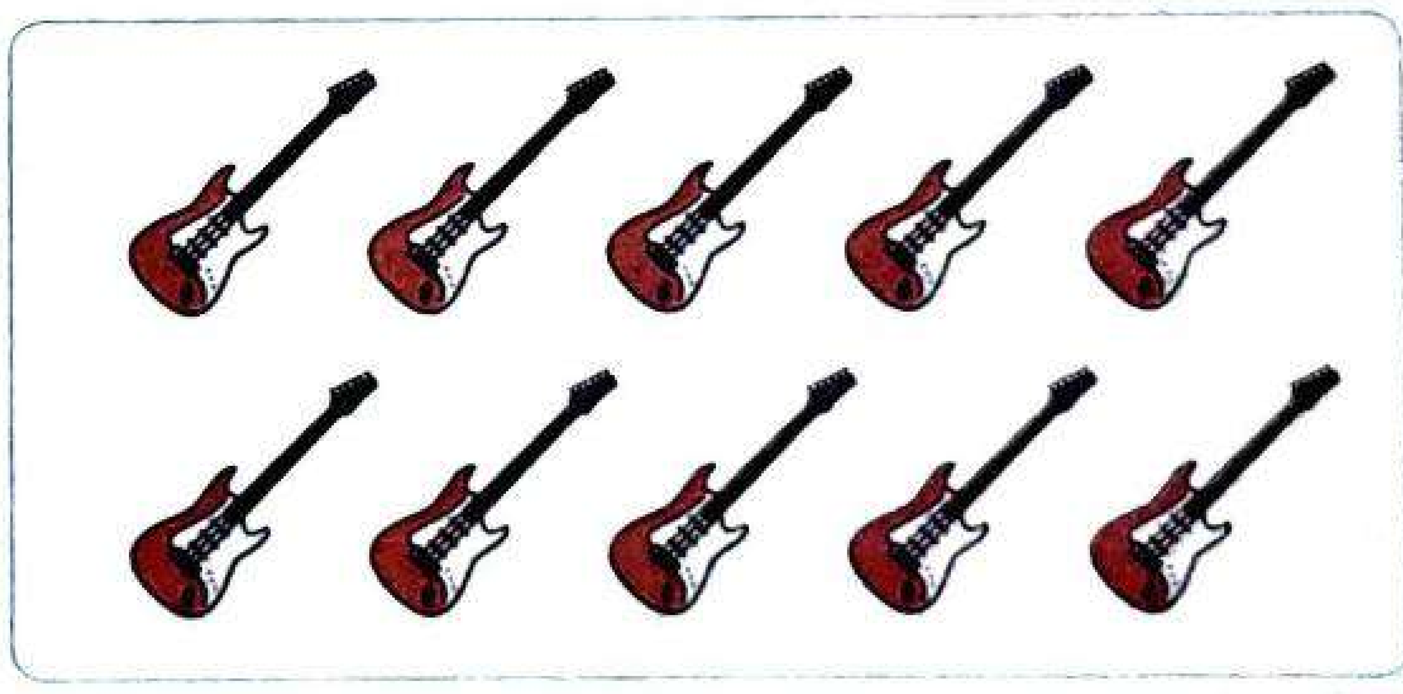
- This array has 4 columns of 3 hearts.
- Skip counting by 3s four times : 3 , 6 , 9 , 12 hearts.

## Practice

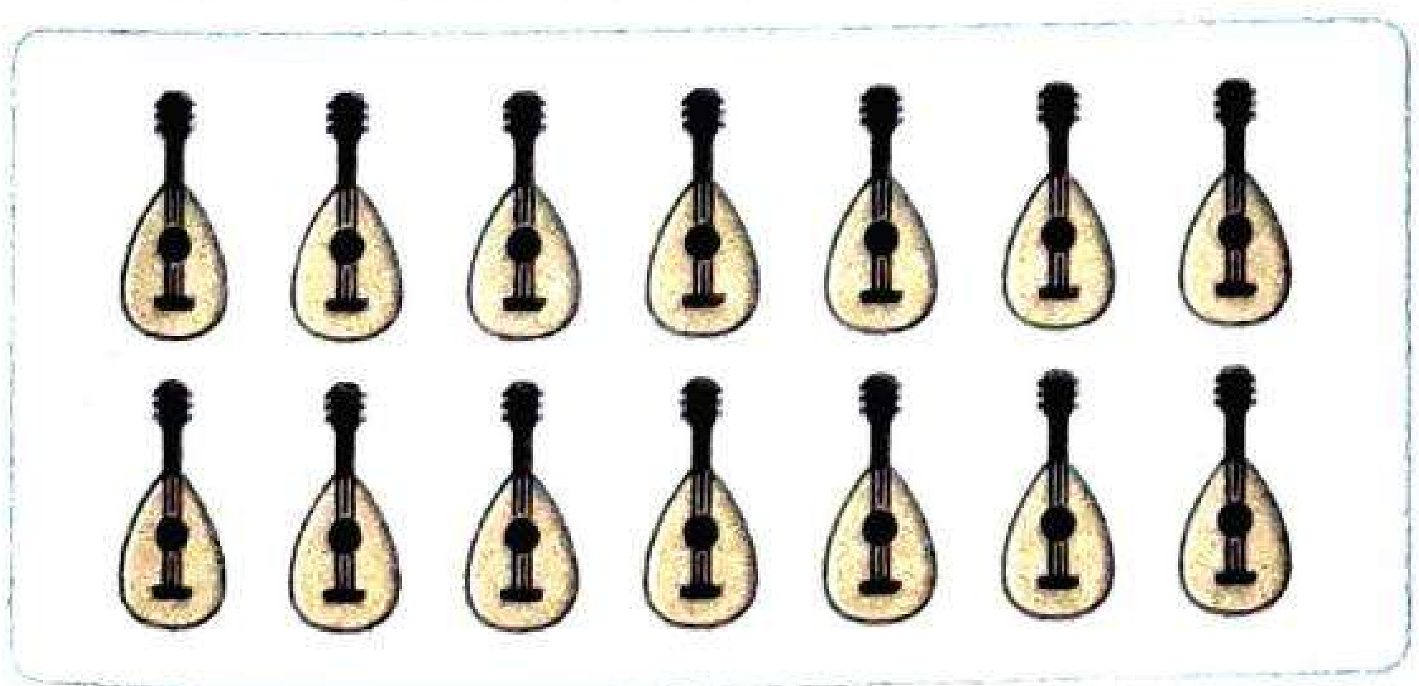
Find the total items of each array using skip counting strategy.



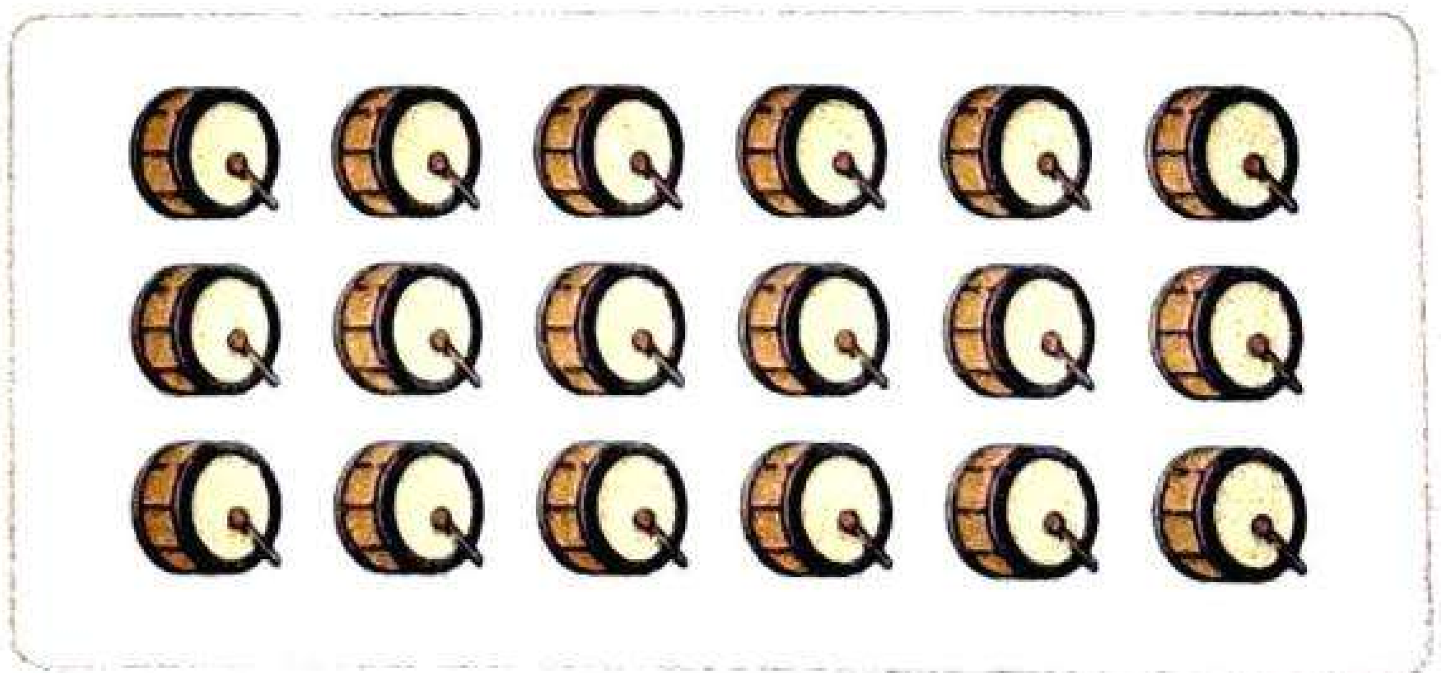
The total = ..............................



The total = ..............................



The total = ..............................



The total = ..............................

• Tell your child that skip counting is not the only strategy to find the total.

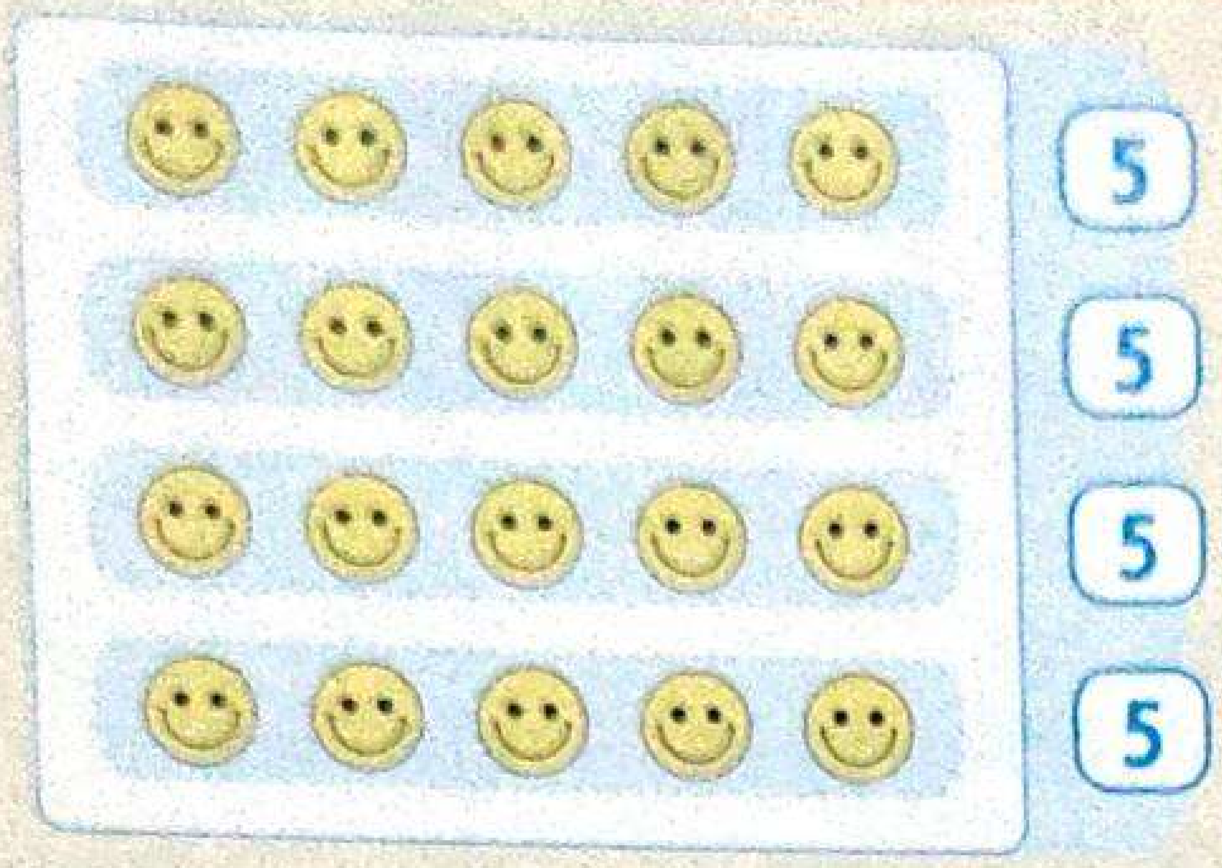
## Learn Repeated addition to find the total number of array

**How to find the total number of objects using repeated addition?**

*This array has 4 rows of 5 faces.*



*This array has 5 columns of 4 faces.*

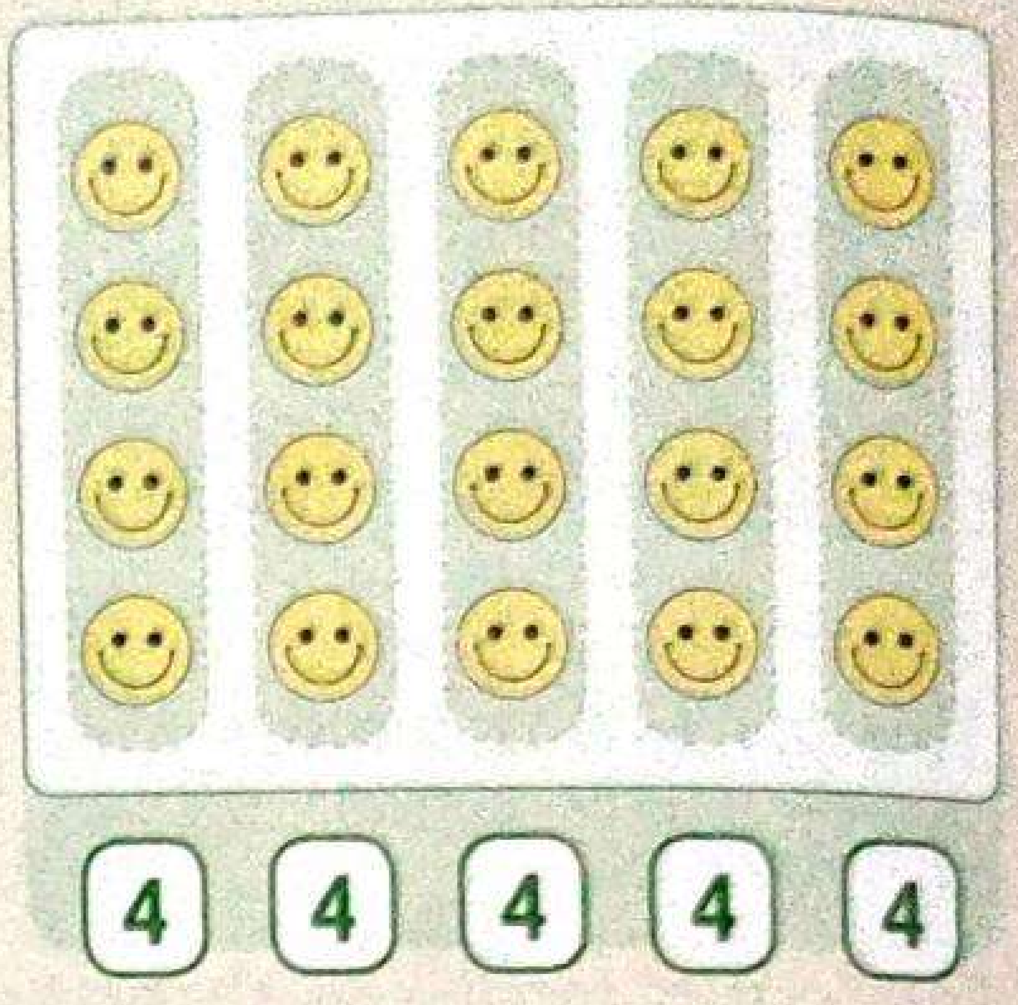



Number of rows = 4

Number of faces in each row = 5

Total number of faces =

5 + 5 + 5 + 5 = 20




Number of columns = 5

Number of faces in each column = 4

Total number of faces =

4 + 4 + 4 + 4 + 4 = 20

*Notice*
*Both ways get the same total.*

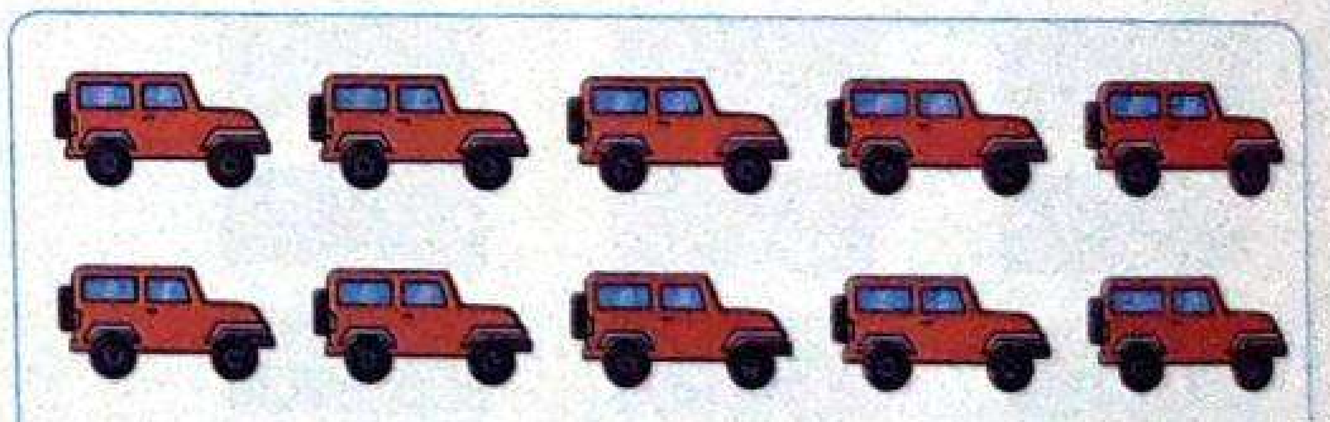
## Practice

**Write the repeated addition and skip counting steps to find the total.**



Repeated addition : ____________

Skip counting : ____________



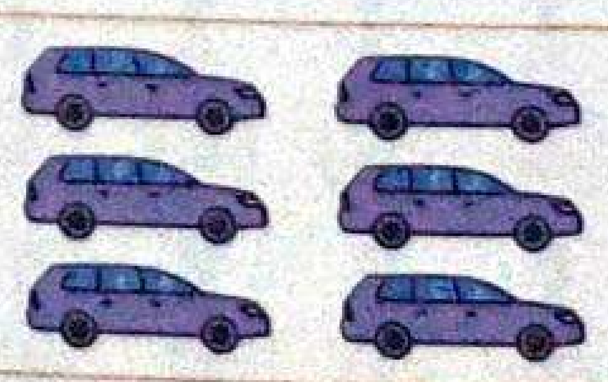
Repeated addition : ____________

Skip counting : ____________



Repeated addition : ____________

Skip counting : ____________



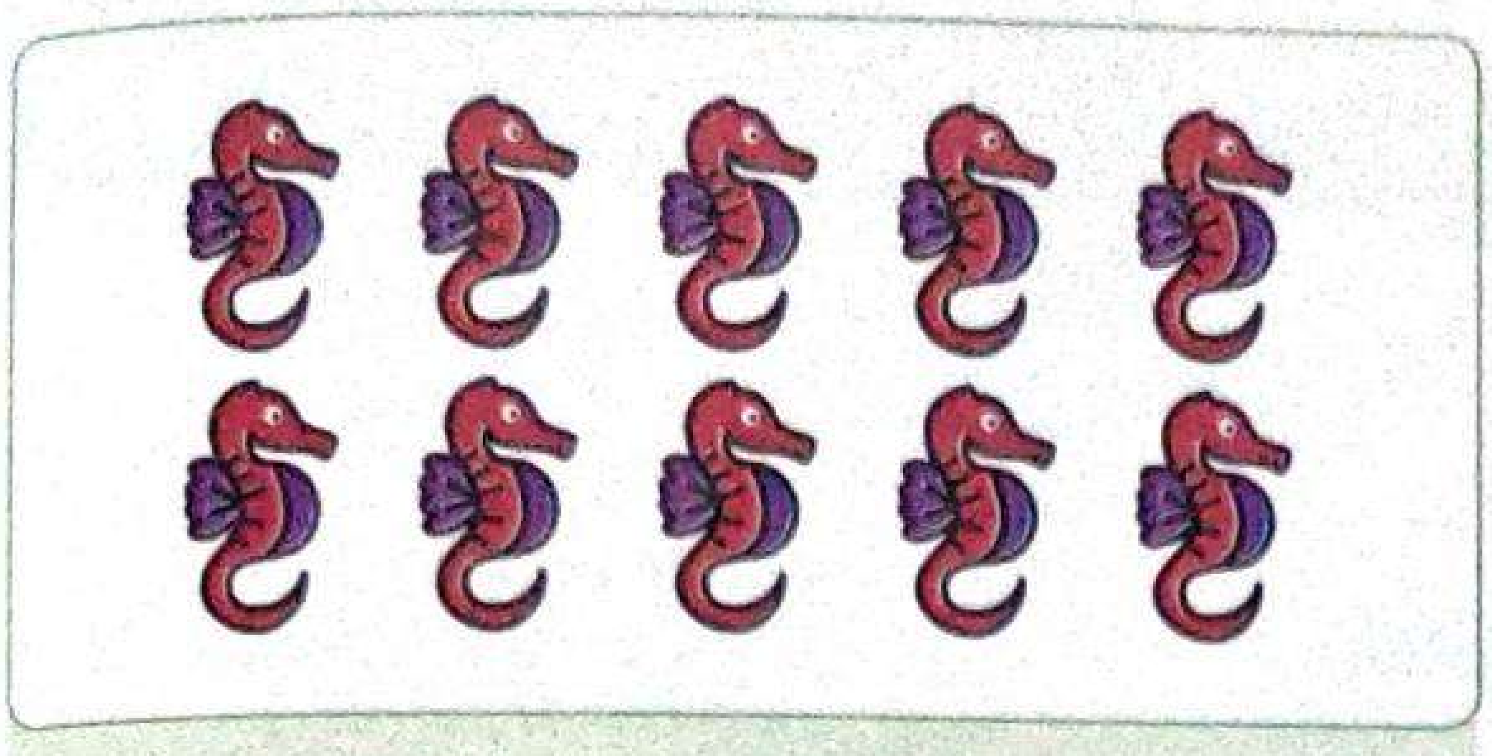
Repeated addition : ____________

Skip counting : ____________

**Notes for parents**

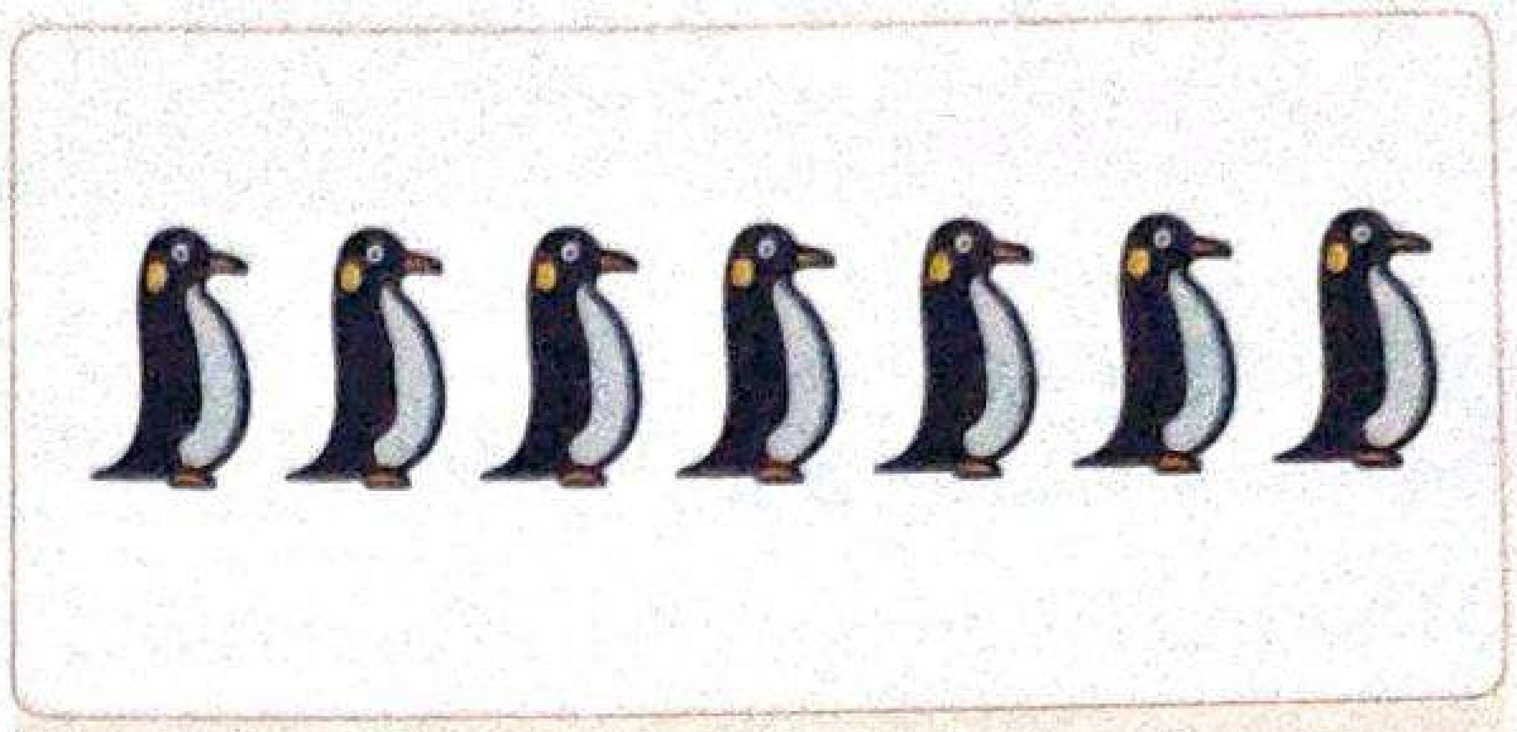
- Tell your child that repeated addition and skip counting are not the only strategies to find the total.

Look at each array. Complete.



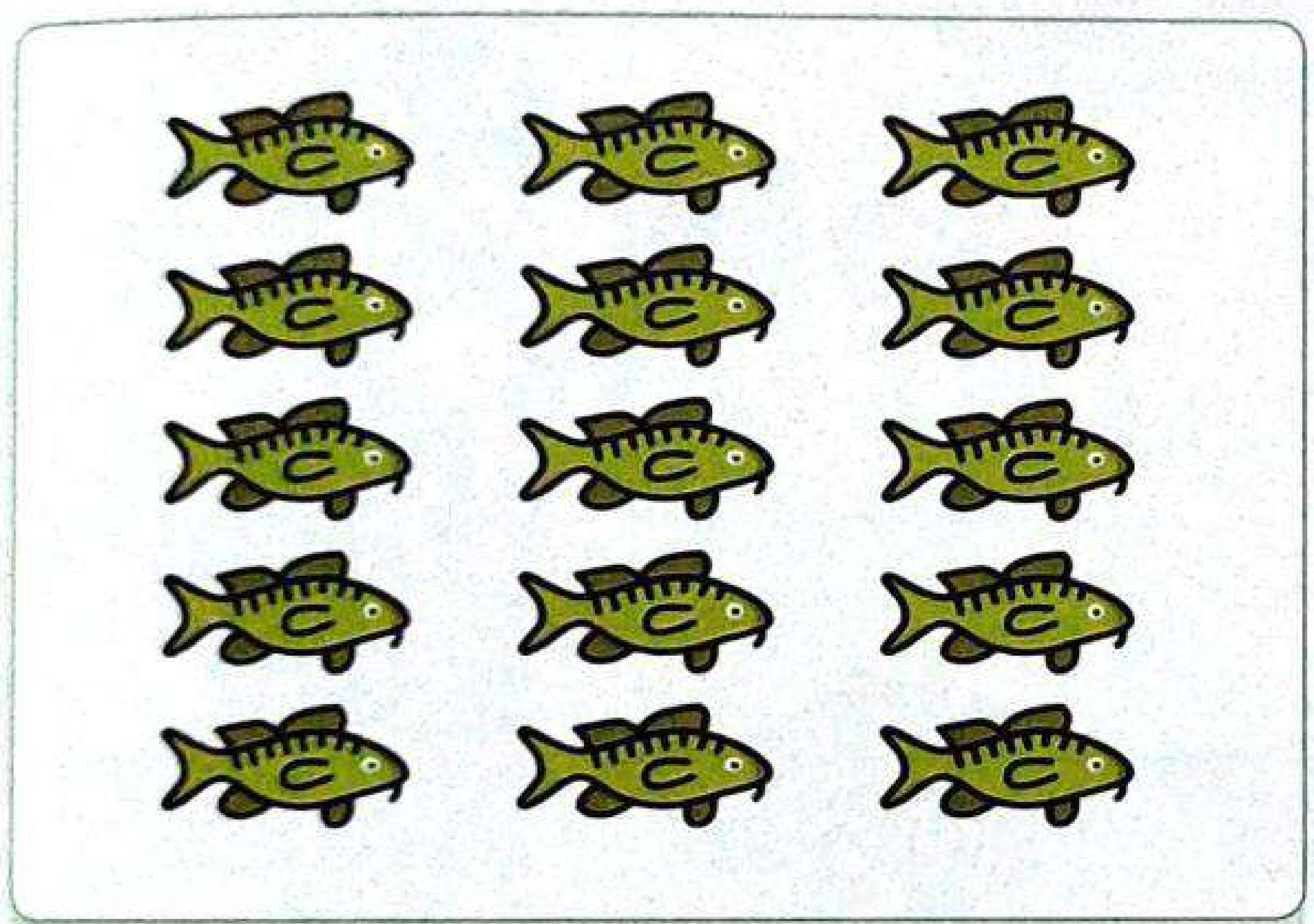
____ equal rows ____ in each row

____ in all.



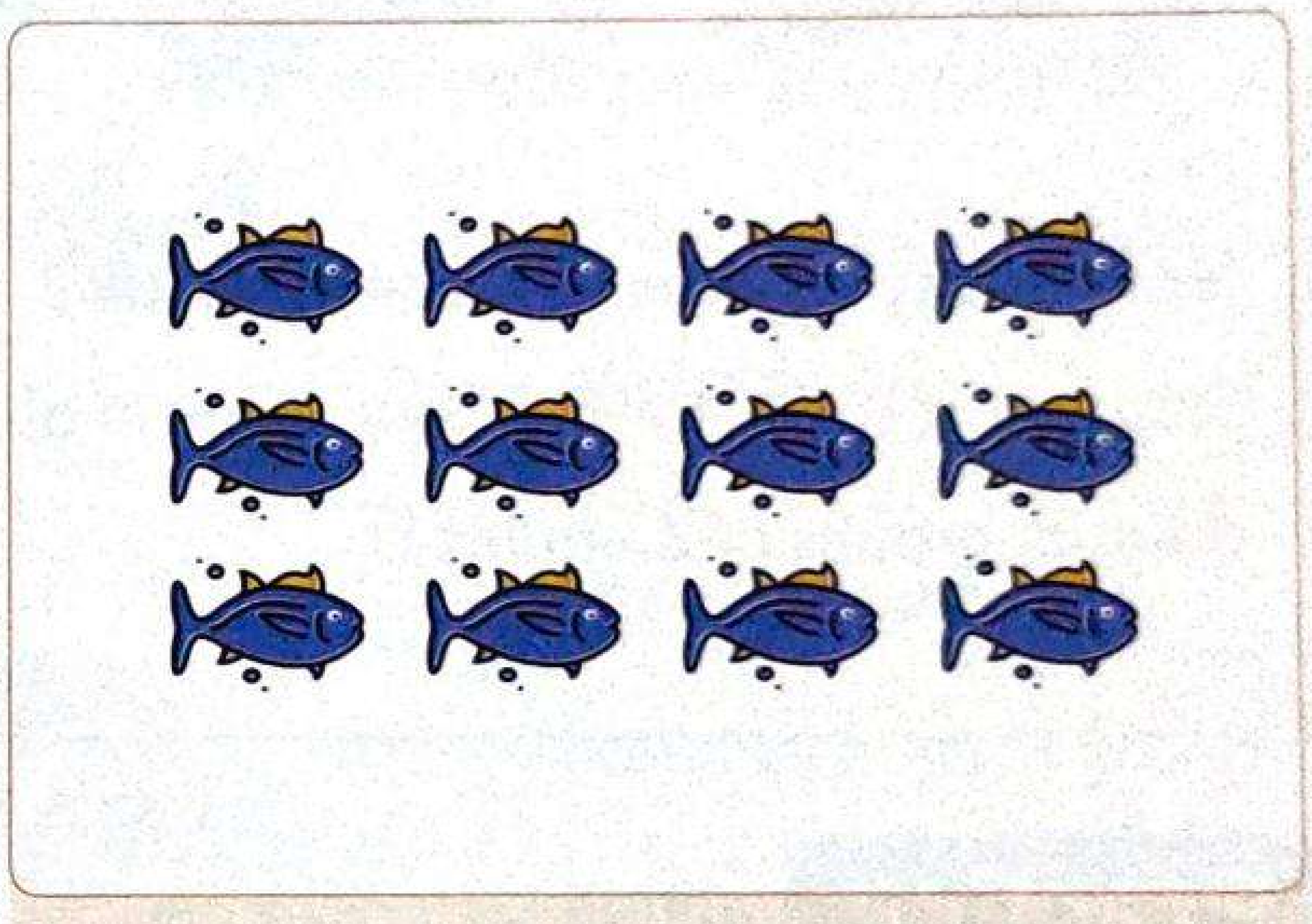
____ equal columns ____ in each column

____ in all.



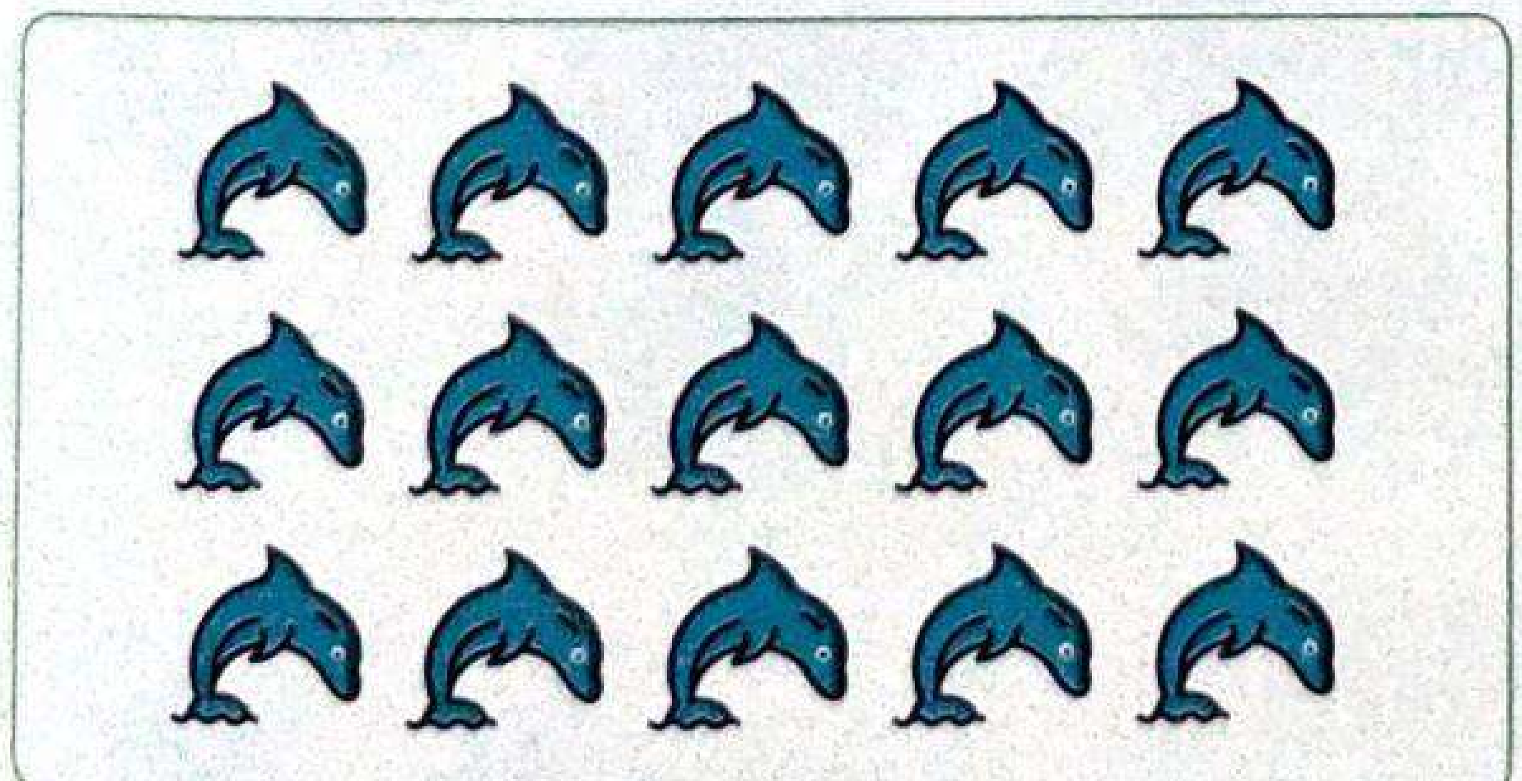
____ equal rows ____ in each row

____ in all.



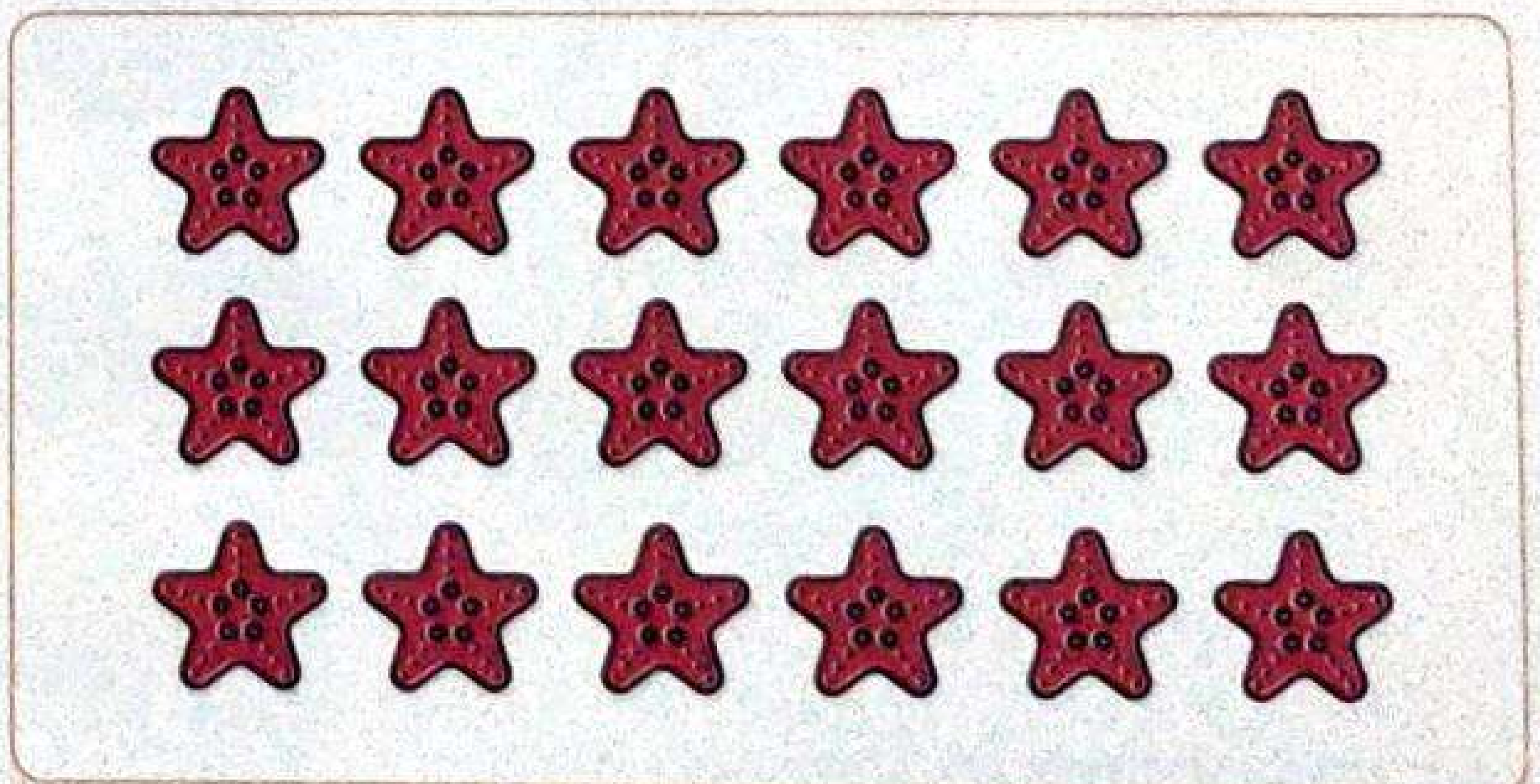
____ equal columns ____ in each column

____ in all.



____ equal rows ____ in each row

____ in all.



____ equal columns ____ in each column

____ in all.

• Ask your child to use repeated addition strategy or skip counting strategy to find the total number of each array.

Place a smiley face

Lessons

# 17 & 18 Multiplication

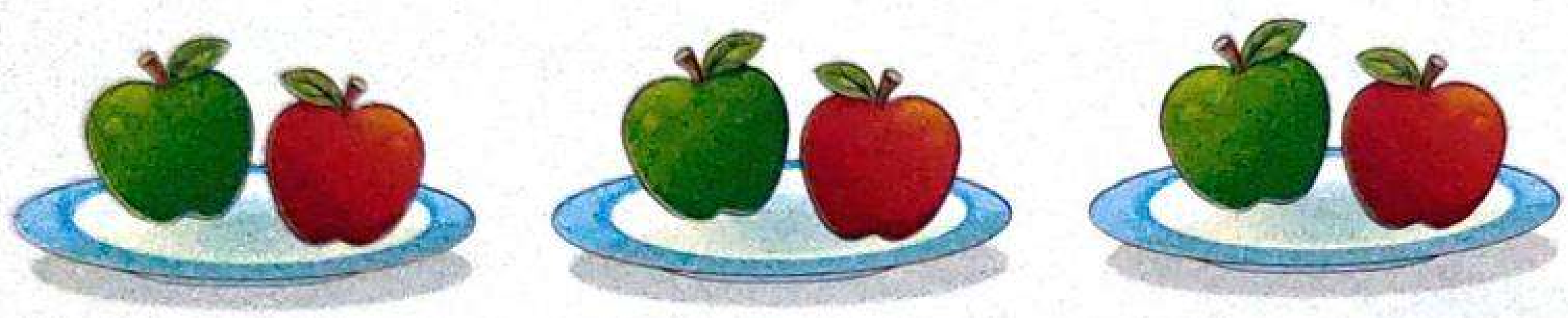
## Pre-study Equal groups

*Vocabulary*

Equal groups
*are groups that have the sa[me] number of items.*

There are 3 groups each of them has 2 apples.

They are 3 equal groups.



**How many apples are there in all ?**

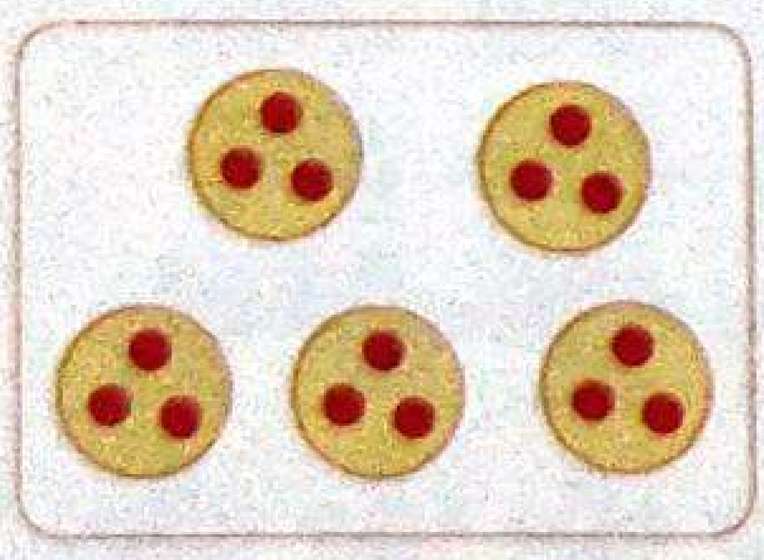
Skip count by **2**s to find how many in all : **2**, **4**, **6**

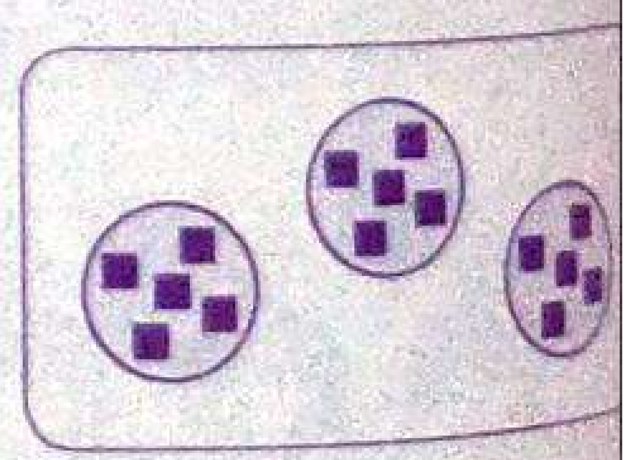
**3** equal groups of **2** equals **6**



## Practice

**Match.**



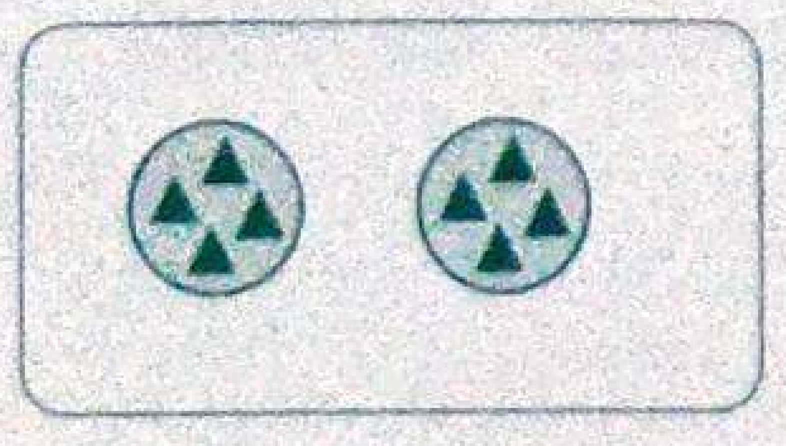


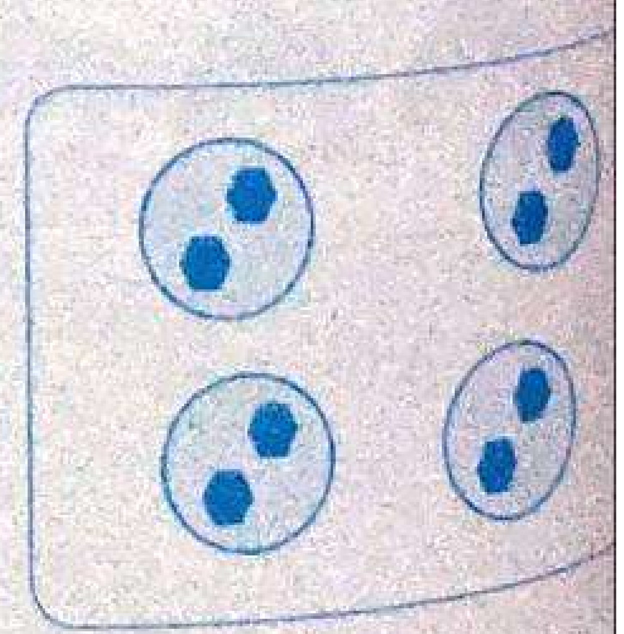
4 equal groups of 2

3 equal groups of 5

5 equal groups of 3

2 equal groups of 4





**Notes for parents**

- Ask your child to count how many times he/she needs to skip count by 3, to get 12. He/she should answer 4 times "3, 6, 9, 12".

Circle the equal groups. Skip count to find out how many there are in all.



_____ equal groups

_____ birds in each group

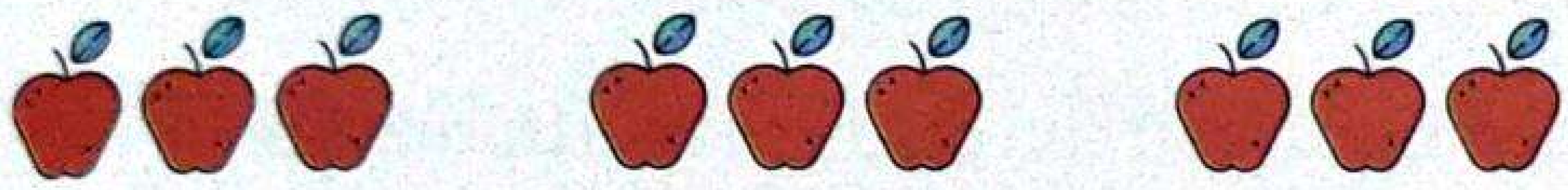
_____ birds in all



_____ equal groups

_____ flowers in each group

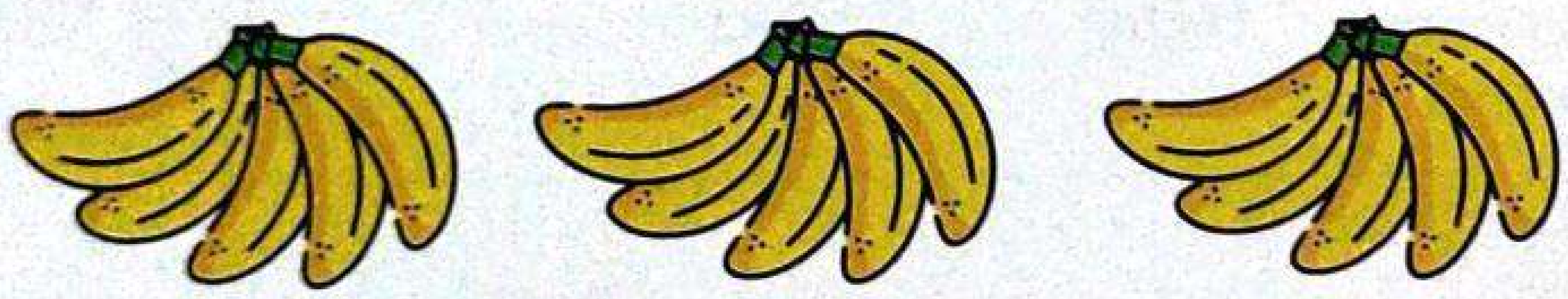
_____ flowers in all



_____ equal groups

_____ apples in each group

_____ apples in all

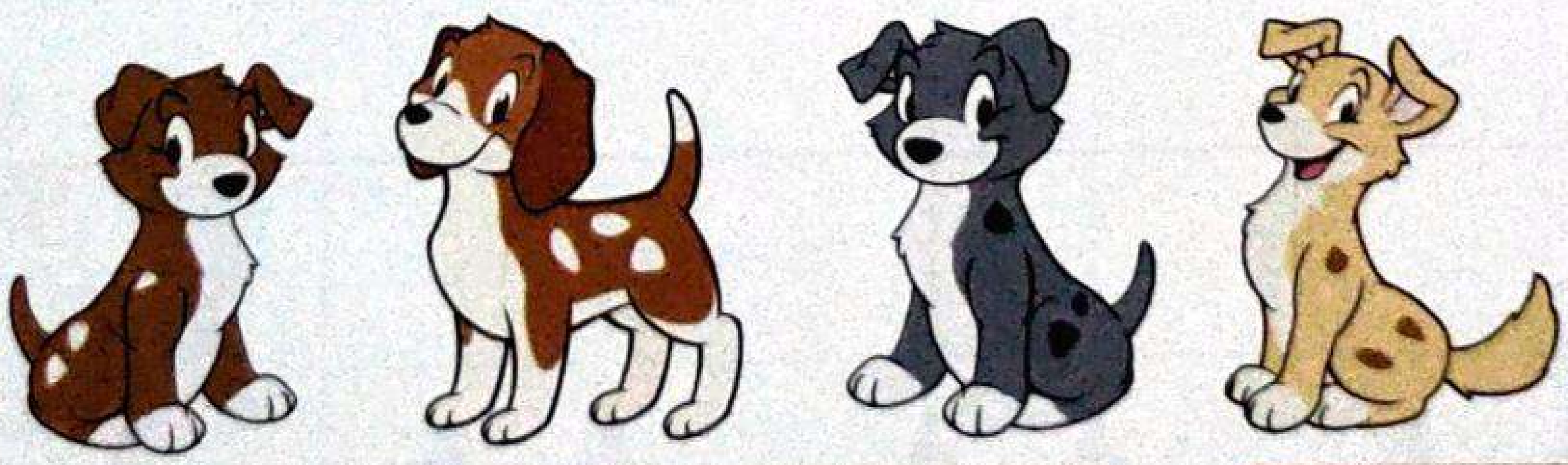


_____ equal groups

_____ bananas in each group

_____ bananas in all

Look at the picture. Write how many.



| How many legs ? | How many tails ? | How many eyes ? |
|---|---|---|
| _____ equal groups | _____ equal groups | _____ equal groups |
| of _____ legs | of _____ tail | of _____ eyes |
| _____ legs in all | _____ tails in all | _____ eyes in all |

## Learn Multiplication as repeated addition

**Vocabulary**

**Factor**
one of the numbers multiplied.

**Product**
the number obtained when multiplying.

- There are 3 equal groups of 5 flowers




- You can use **repeated addition** to find the total.

5 + 5 + 5 = 15 Addition sentence

- When you put together equal groups, you can also use **multiplication**

What you write : 3 × 5 = 15 Multiplication sentence

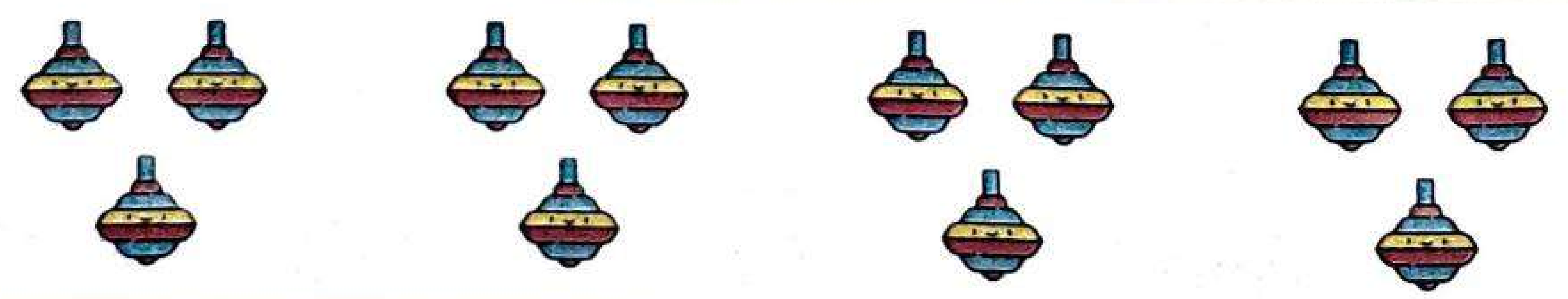
3 → Factor; × → Multiplication symbol; 5 → Factor; 15 → Product

What you say : 3 times 5 equals 15

- Multiplication tells us how many times we need to add a number to get the total.

## Check

**Complete.**



4 groups of ______

3 + 3 + 3 + 3 = ______

4 x ______ = ______

**Notes for parents**

- Use small objects. Ask your child to make 2 groups of 6. Then have your child write an addition sentence and a multiplication sentence.

## Practice

**Complete.**



Think

groups of

Add :

Multiply :



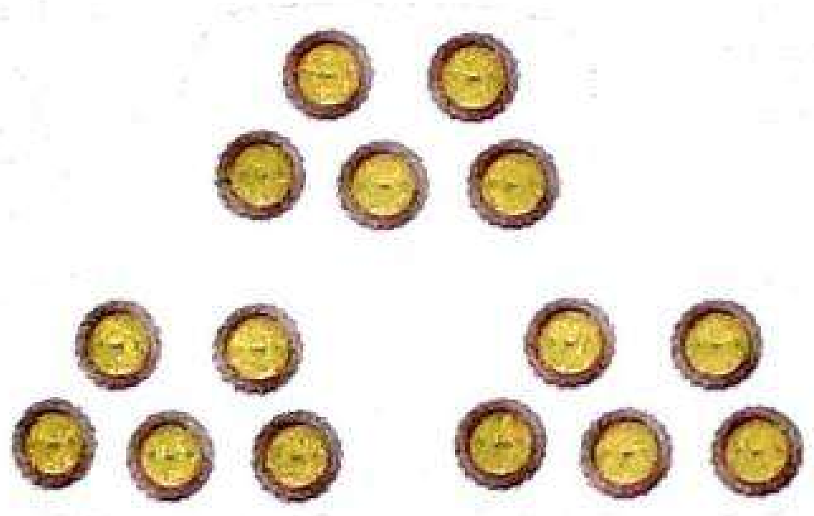
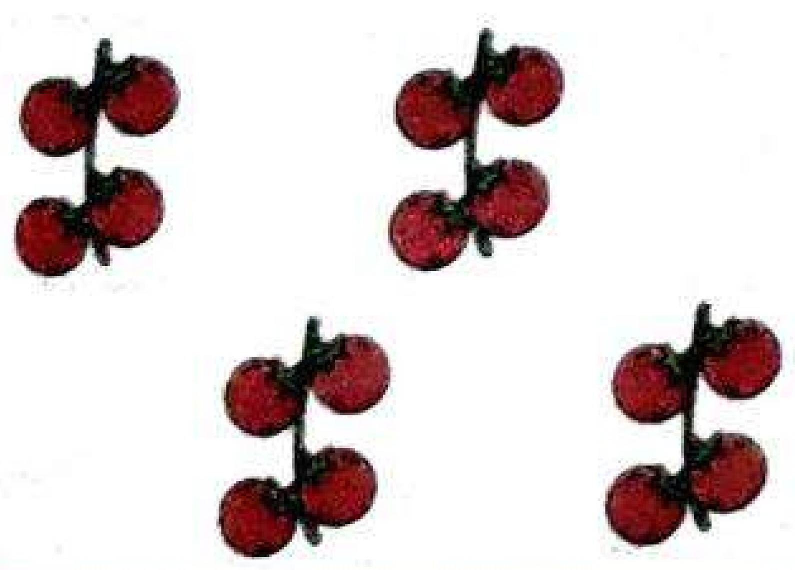
Think

groups of

Add :

Multiply :

**Complete.**

| Equal groups | Model | Addition sentence | Multiplication sentence |
|---|---|---|---|
|  | _____ groups of _____ | _____ | _____ |
|  | _____ groups of _____ | _____ | _____ |
|  | _____ groups of _____ | _____ | _____ |
|  | _____ groups of _____ | _____ | _____ |

• Ask your child to compare the addition sentence and the multiplication sentence and compare the sum and the product. They should be the same.

Draw to model groups. Then write an addition sentence and a multiplication sentence for each.

2 groups of 4

3 groups of 2

3 groups of 3

4 groups of 5

2 groups of 3

5 groups of 4

**Notes for parents**

• Ask your child to find the total number of each model.

## Learn How does an array show multiplication ?

- An array shows objects in equal rows.

This array shows 3 rows of 4 cupcakes



3 rows

4 in each row

To fined the total number of cupcakes, you can add or multiply.

Add : 4 + 4 + 4 = 12

Multiply : [3] × [4] = [12] → product "total"

4 → Number in each row

3 → Number of rows

Say : 3 times 4 equals 12

## Check

Complete.



2 rows of ___

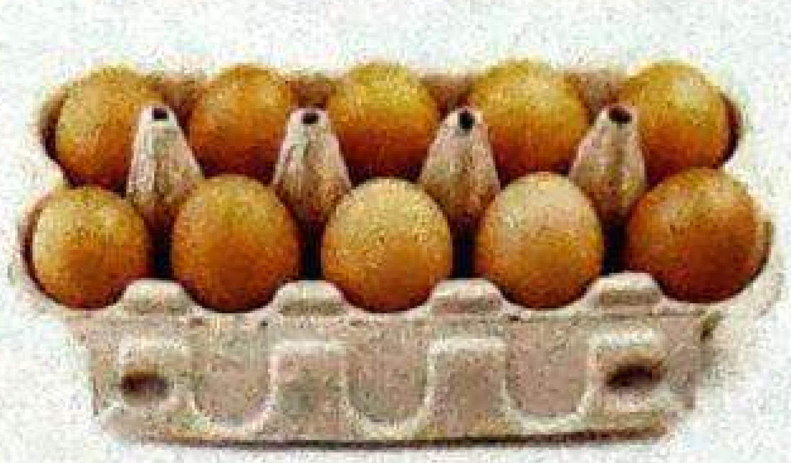
___ + ___ = ___

___ × ___ = ___

___ times ___ equal ___

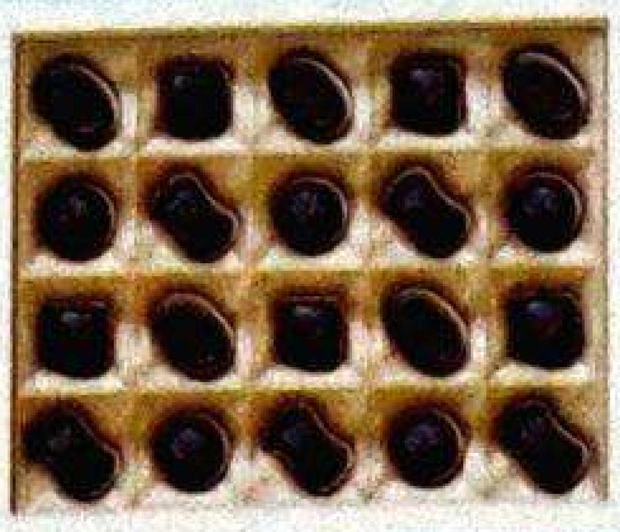
## Practice

Complete each of the following.



2 rows of ___

___ × ___ = ___



4 rows of ___

___ × ___ = ___

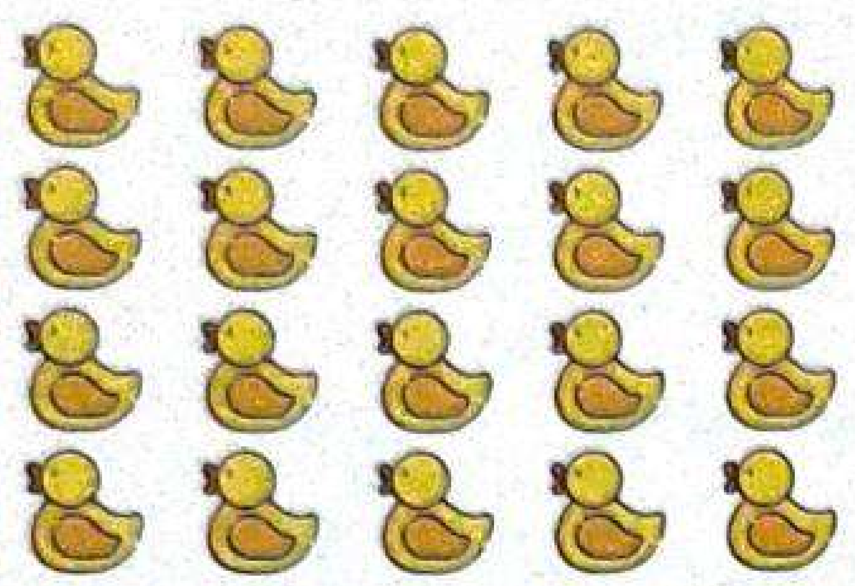


3 rows of ___

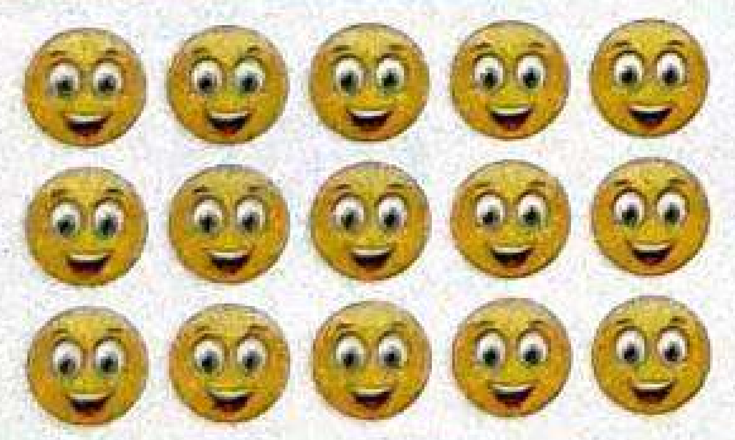
___ × ___ = ___

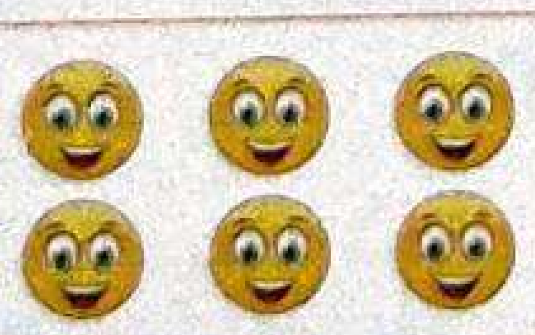
- Let your child use small objects to create an array of 5 rows of 3 and write the multiplication sentence.

## Complete the following table.

| Equal groups | Model | Addition sentence | Multiplication sentence |
|---|---|---|---|
|  | ____ rows of ____ | ____ | ____ |
|  | ____ rows of ____ | ____ | ____ |
|  | ____ rows of ____ | ____ | ____ |

## Match each array to its sentence.



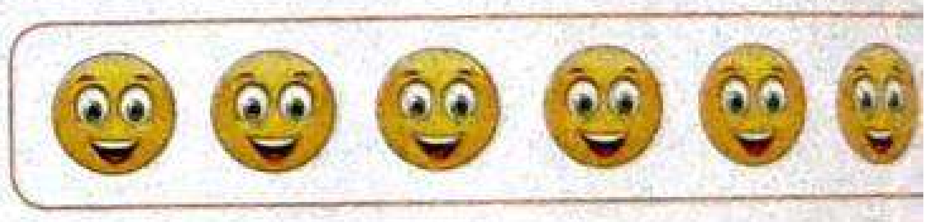


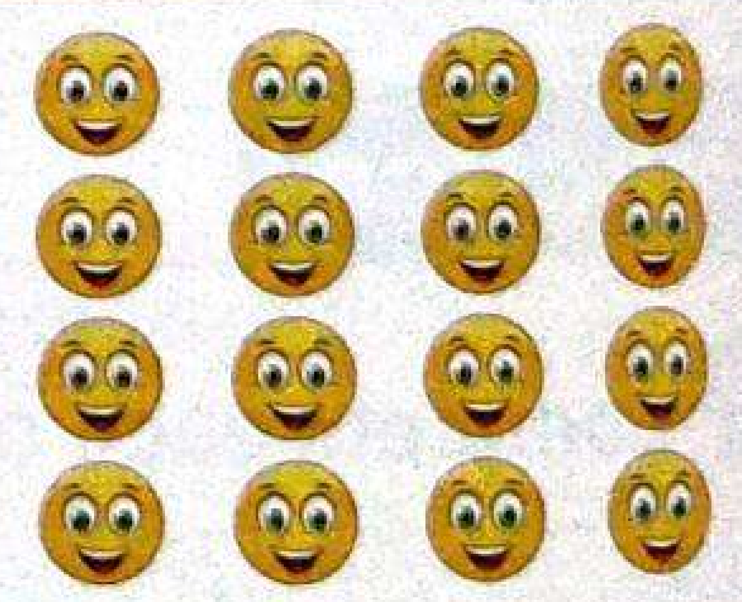
$3 + 3 = 6$

$3 \times 5 = 15$

$4 + 4 + 4 + 4 = 16$

$1 \times 6 = 6$





## Complete.

$3 + 3 + 3 + 3 = ___ \times 3 = ___$

$___ + ___ + ___ = 3 \times 2 = ___$

$5 + 5 = ___ \times 5 = ___$

$___ \times 6 = 6 + 6 + 6 = ___$

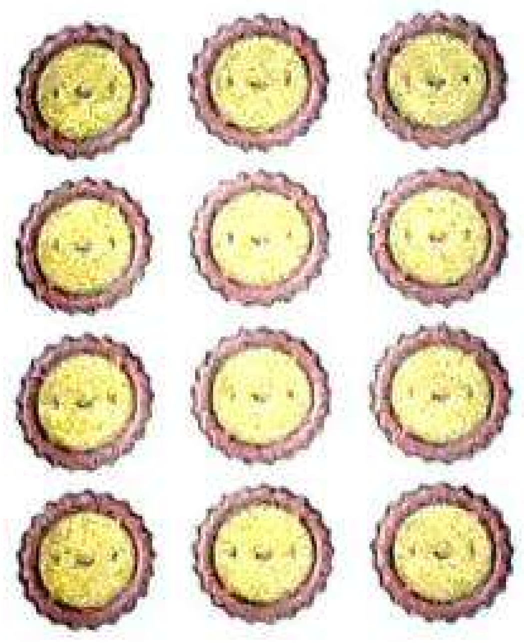
$5 \times 1 = ___ + ___ + ___ + ___ + ___ =$

$4 \times 7 = ___ + ___ + ___ + ___ = ___$

**Notes for parents**

- Ask your child to compare between the sum of the addition sentence and the product of the multiplication sentence.

**Build the array according to the following. Write the multiplication sentence.**



4 rows of 3

$4 \times 3 =$ 12

5 rows of 2

___ × ___ = [ ]

3 rows of 6

___ × ___ = [ ]

5 rows of 5

___ × ___ = [ ]

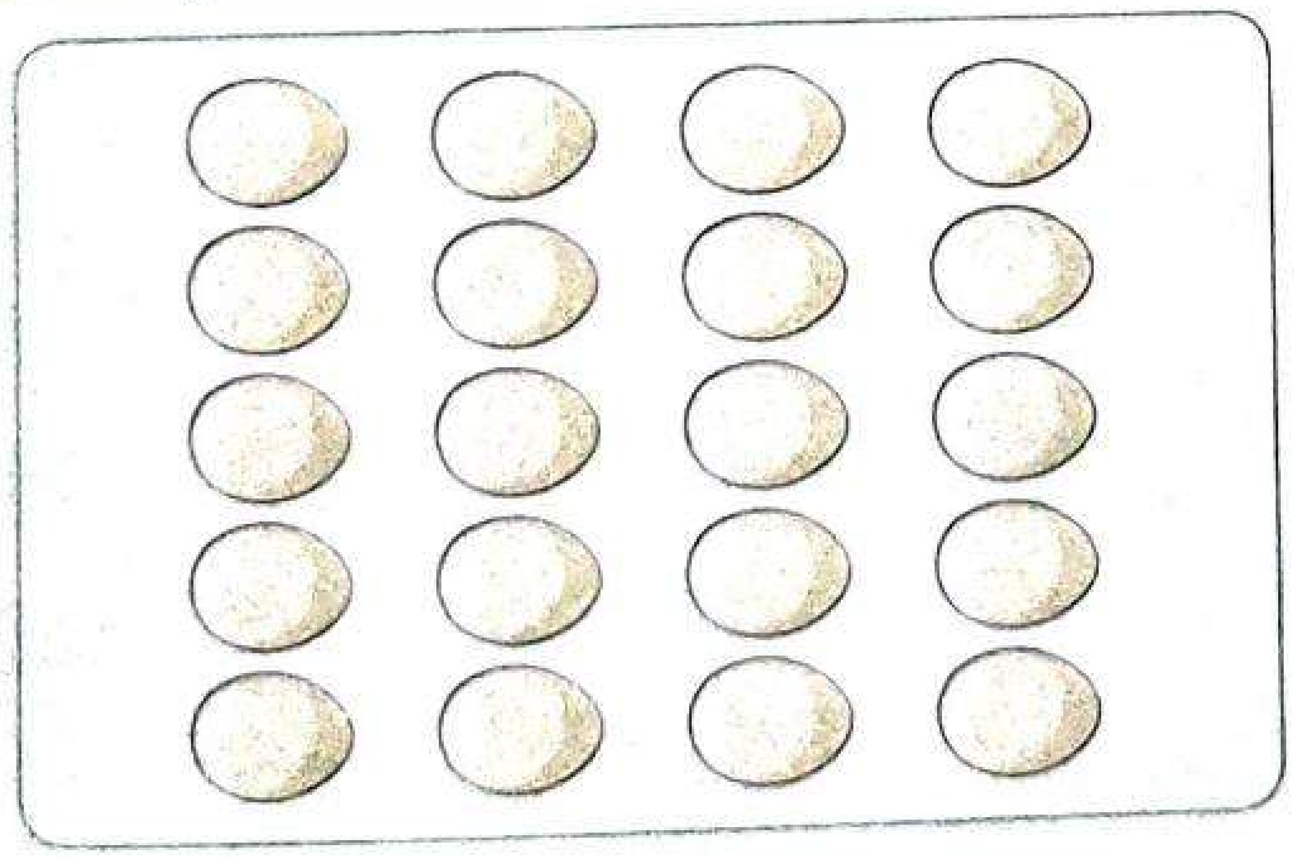
2 rows of 8

___ × ___ = [ ]

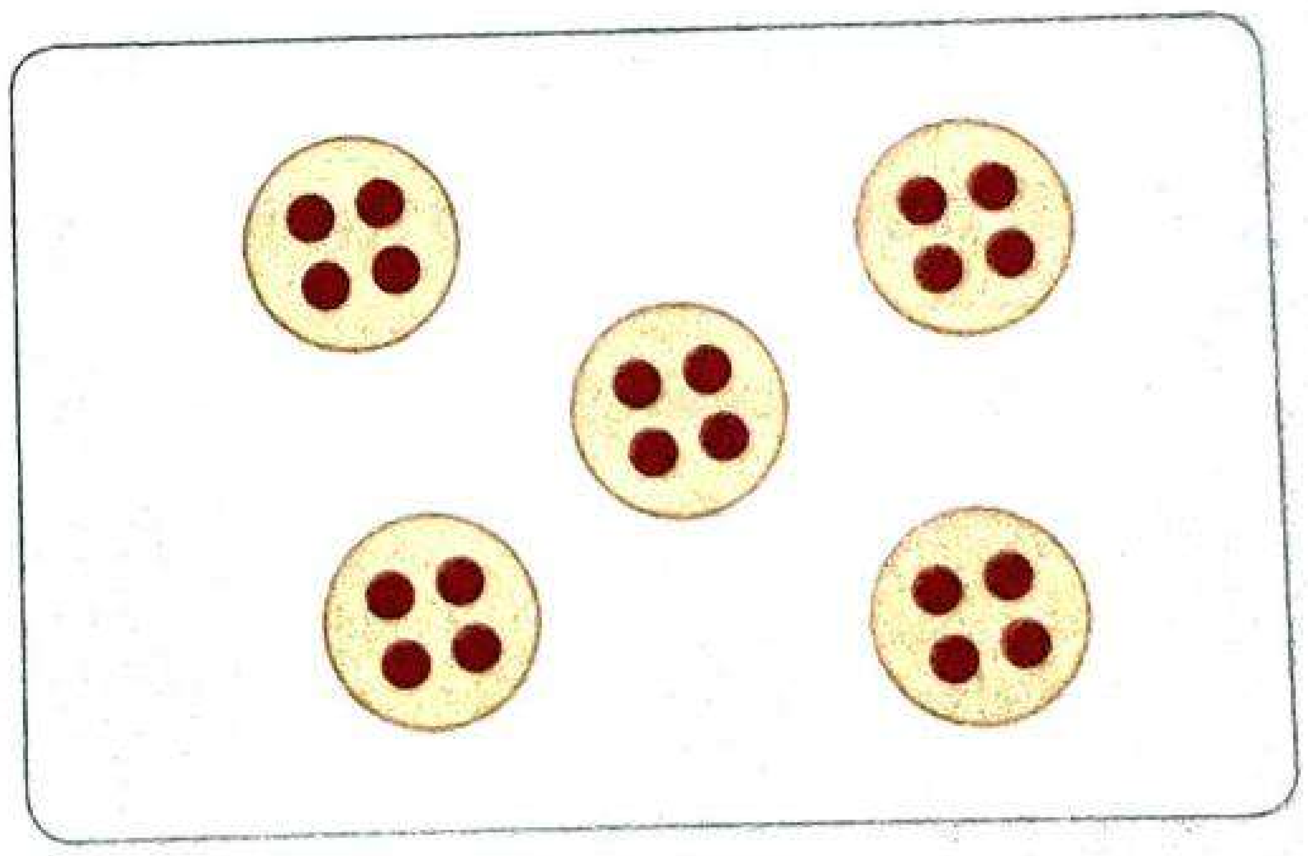
4 rows of 7

___ × ___ = [ ]

**Look at the two images below. Then write the addition sentence and multiplication sentence to find the total.**



- Addition sentence ______
- Multiplication sentence ______



- Addition sentence ______
- Multiplication sentence ______

Look at the array and the equal groups, then answer :

- How are these similar ? ______
- Do they have the same total ? ______
- How are these different ? ______
- How is that possible ? ______

- Ask your child to use objects such as buttons to make an array of 2 rows of 3 and 2 groups of 3, find their total and compare between them.

Place a smiley face

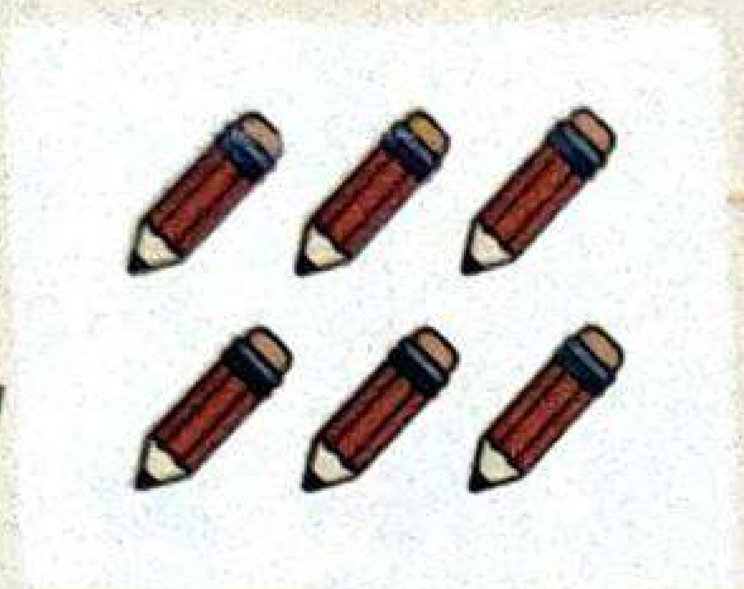
Lessons

# 19 & 20 Multiply in any order

## Learn Commutative property of multiplication "Arrays"

You can multiply in any order and the product is the same.

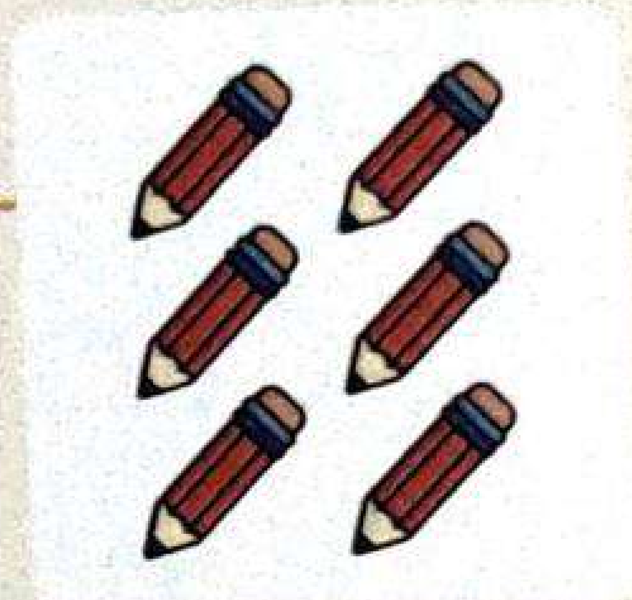
This array is 2 rows of 3



This array is 3 rows of 2



2 rows
3 in each row



3 rows
2 in each row

Add : 3 + 3 = 6
Multiply : 2 × 3 = 6

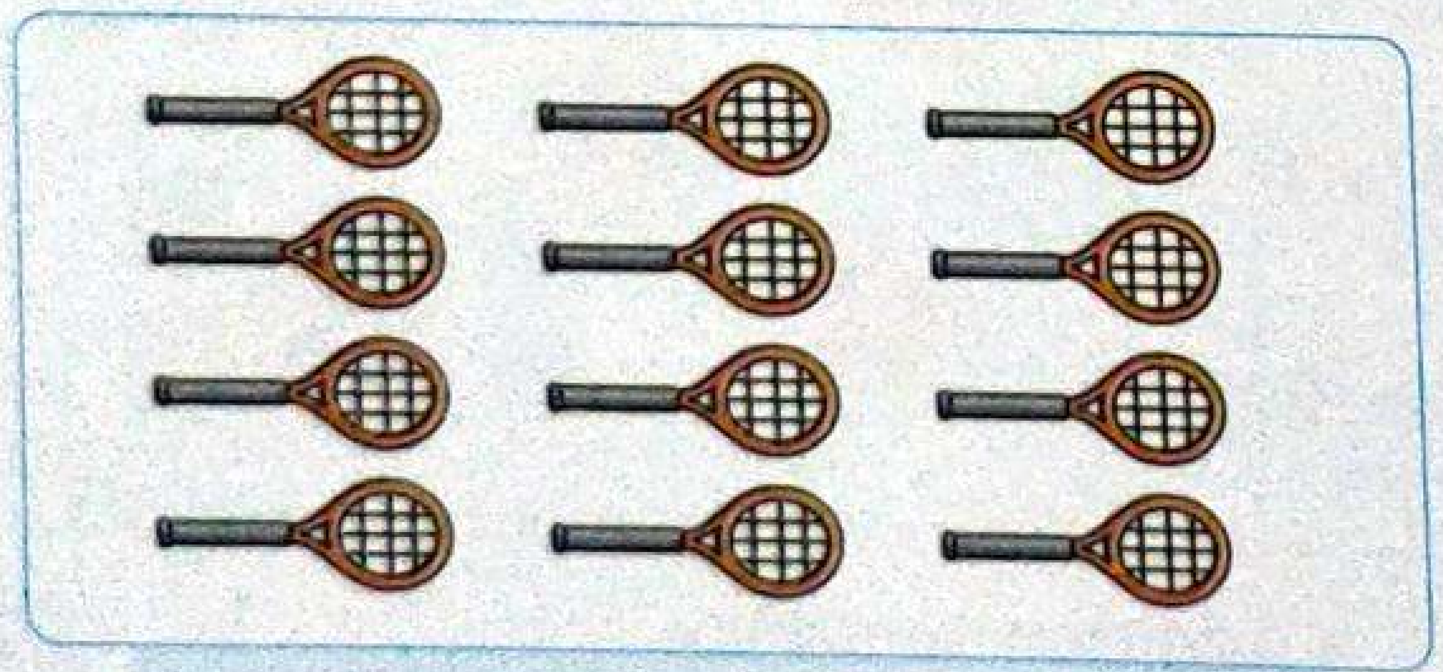
Add : 2 + 2 + 2 = 6
Multiply : 3 × 2 = 6

The factors can be multiplied in any order and their product is the same.

So, 2 × 3 = 3 × 2 = 6

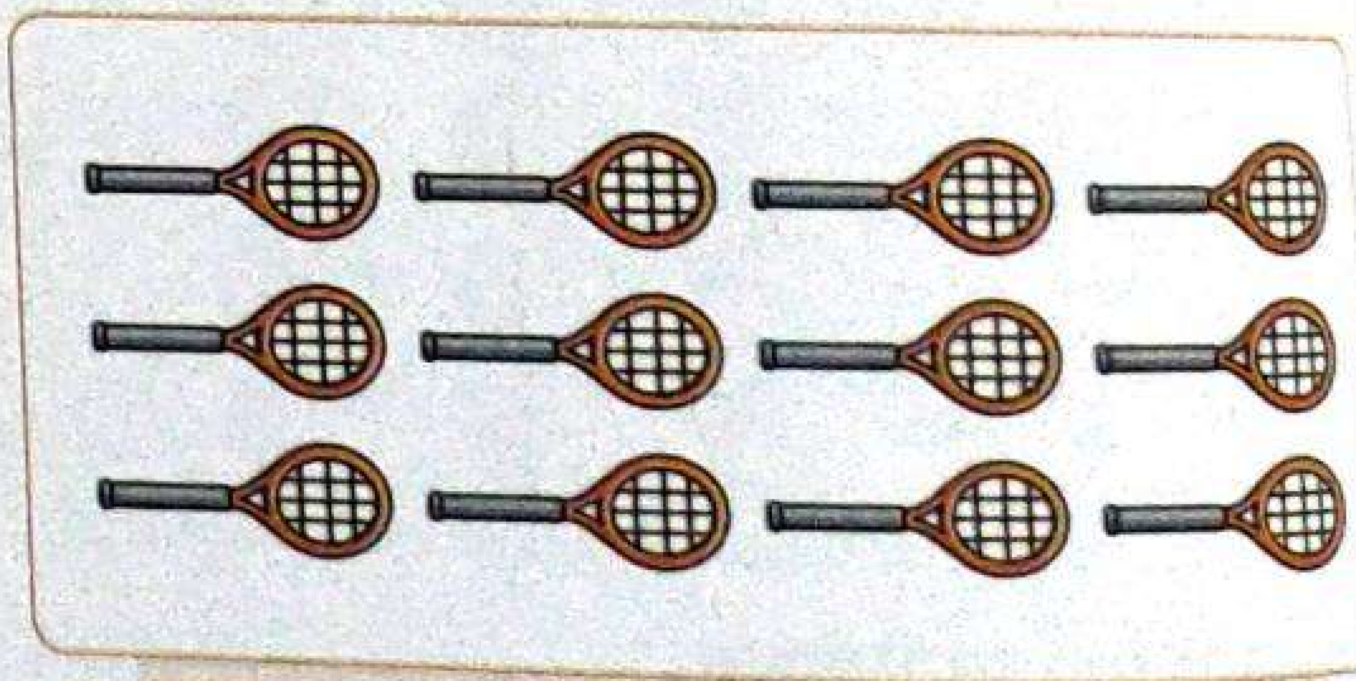
## Check

Write how many. Write the multiplication sentences.



____ rows of ____

☐ × ☐ = ☐



____ rows of ____

☐ × ☐ = ☐

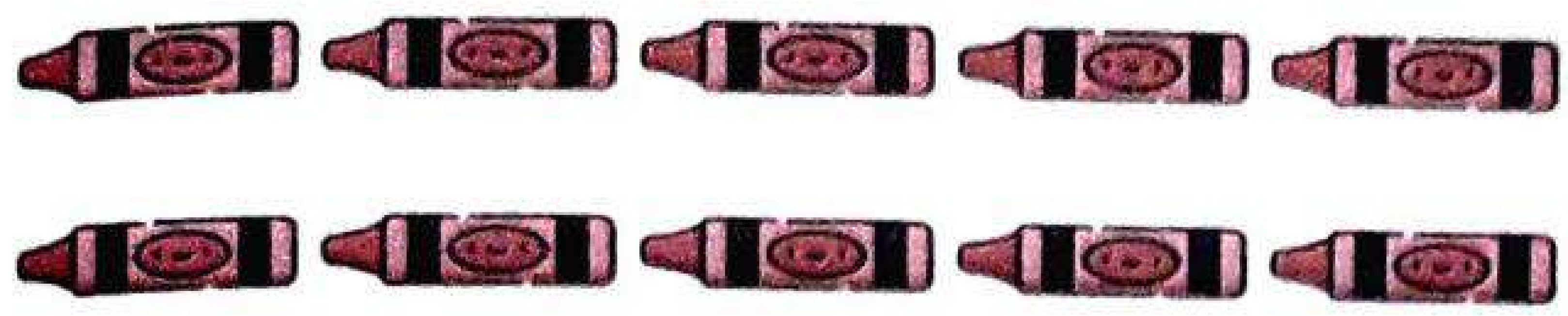
What did you notice ? ☐ × ☐ = ☐ × ☐

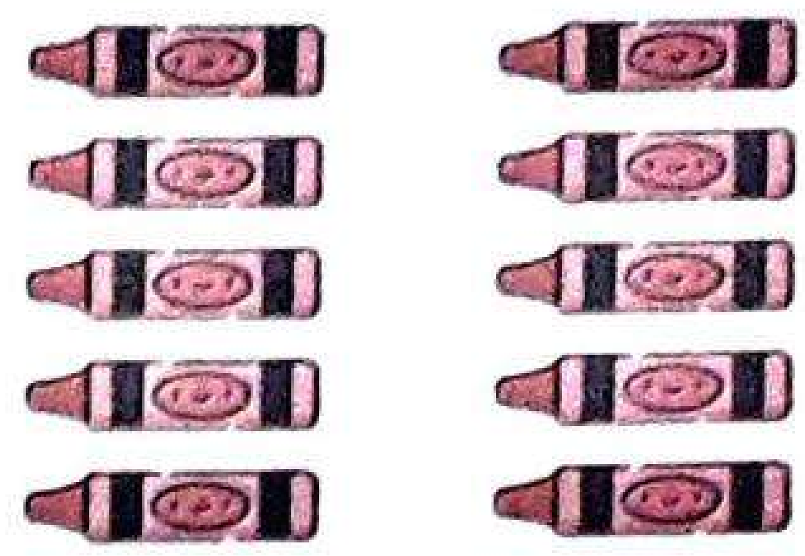
Notes for parents

- Ask your child to use objects to show you 3 rows of 6 and 6 rows of 3 and then find how many obje in all of each.

## Practice

Complete the following.





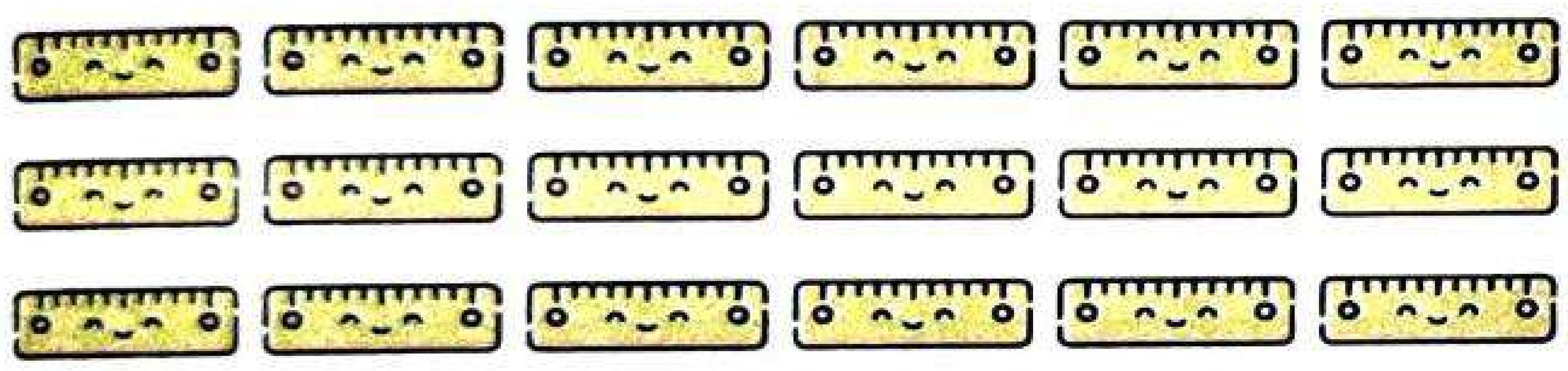
_____ rows of _____ columns

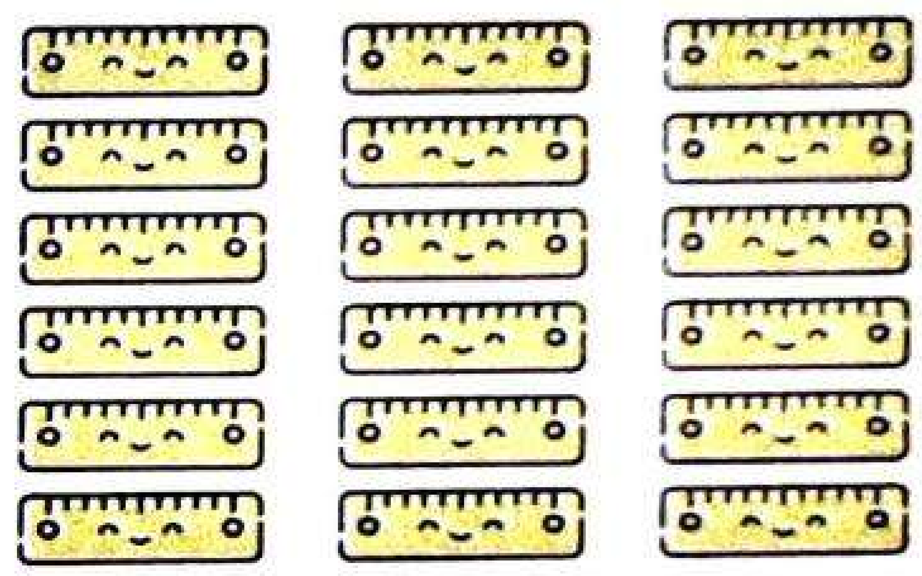
_____ × _____ = _____

_____ rows of _____ columns

_____ × _____ = _____

_____ × _____ = _____ × _____





_____ rows of _____ columns

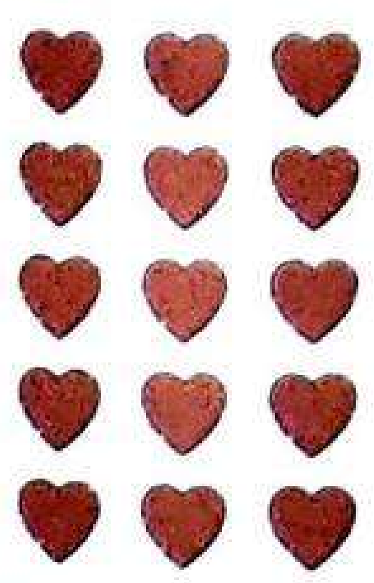
_____ × _____ = _____

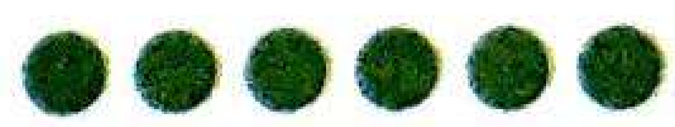
_____ rows of _____ columns

_____ × _____ = _____

_____ × _____ = _____ × _____

Write the multiplication sentence for each array. Then draw the array that shows the commutative property.





• Ask your child to arrange small objects such as buttons or beans, to show $2 \times 6$ and $6 \times 2$

## Learn Commutative property of multiplication "Equal groups"

You can multiply in any order and the product is the same.

There are 3 groups of 4



There are 4 groups of 3



Add : $4 + 4 + 4 = 12$

Multiply : $3 \times 4 = 12$



Add : $3 + 3 + 3 + 3 = 12$

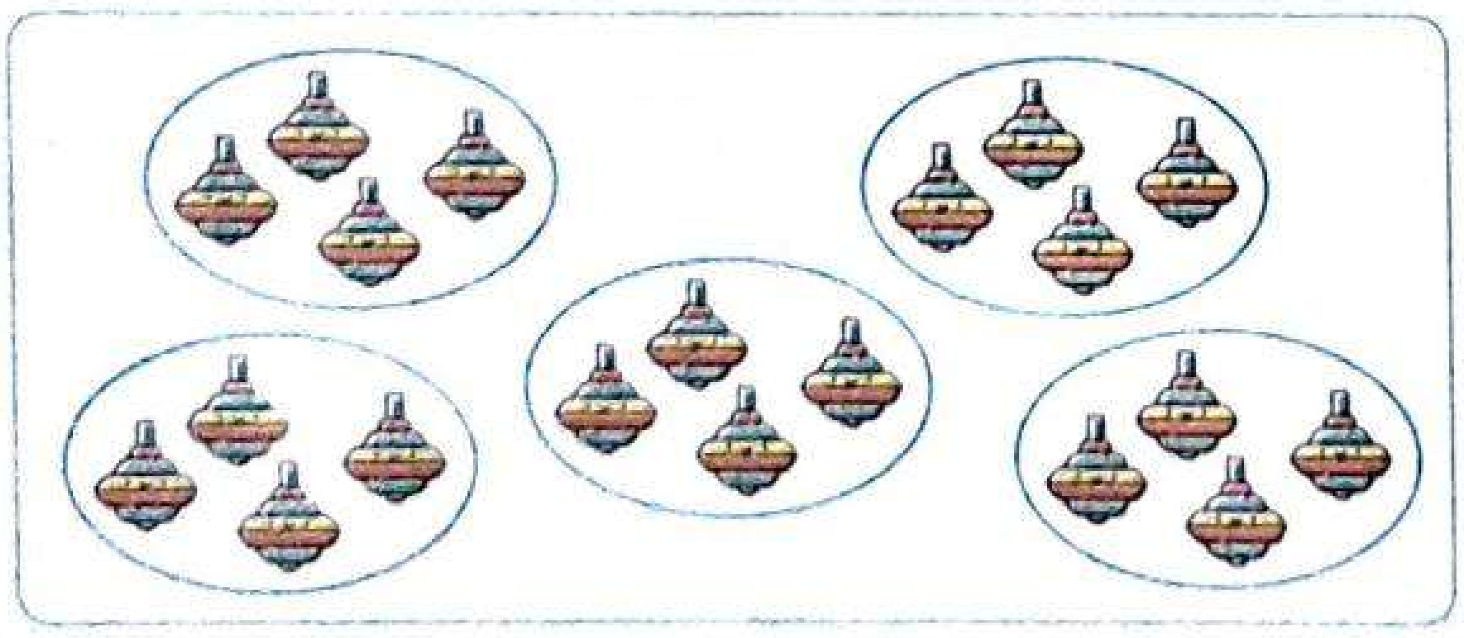
Multiply : $4 \times 3 = 12$

The factors can be multiplied in any order and their product is the same.

So, $3 \times 4 = 4 \times 3 =$ 12

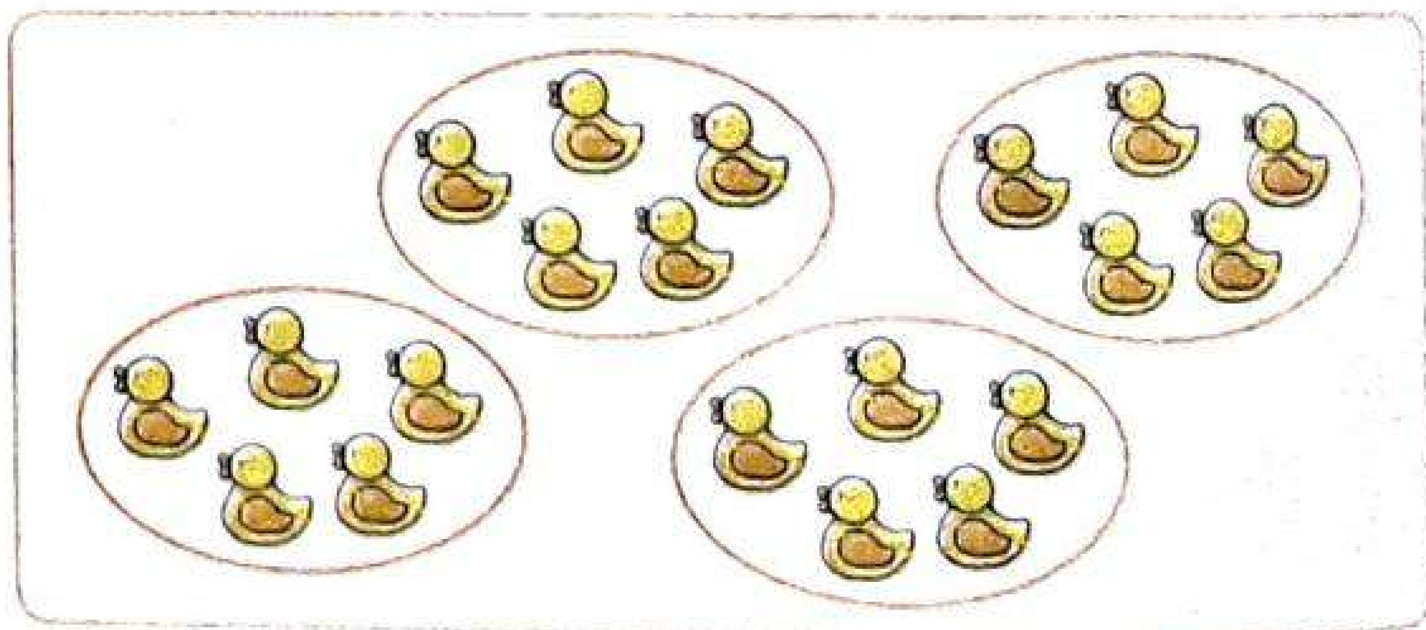
## Check

Write how many. Write the multiplication sentences.



☐ groups of ☐

☐ × ☐ = ☐



☐ groups of ☐

☐ × ☐ = ☐

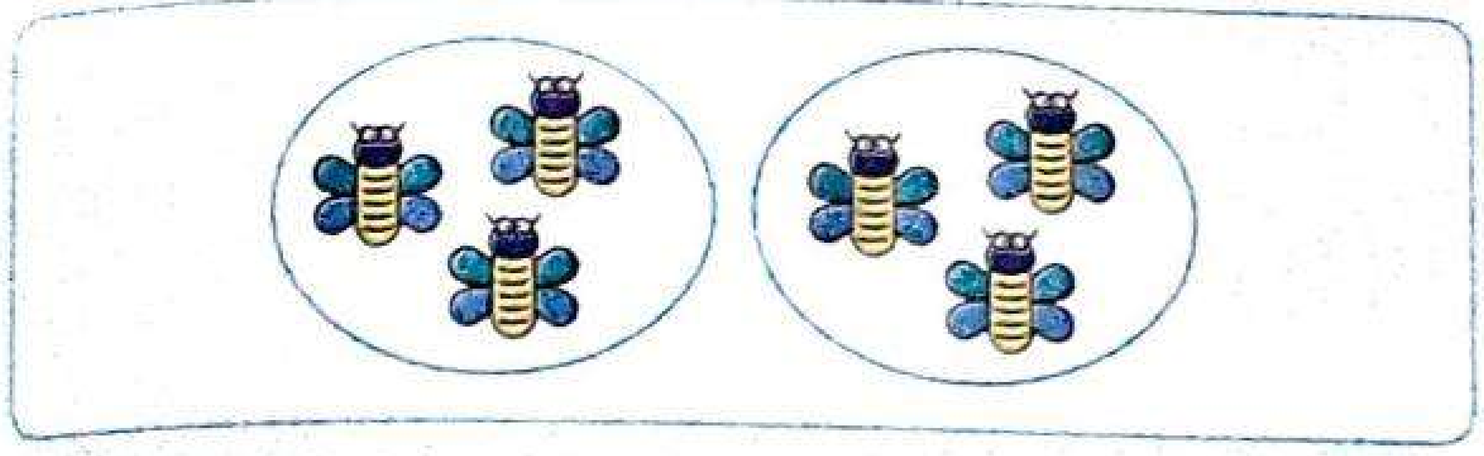
What did you notice ? ☐ × ☐ = ☐ × ☐

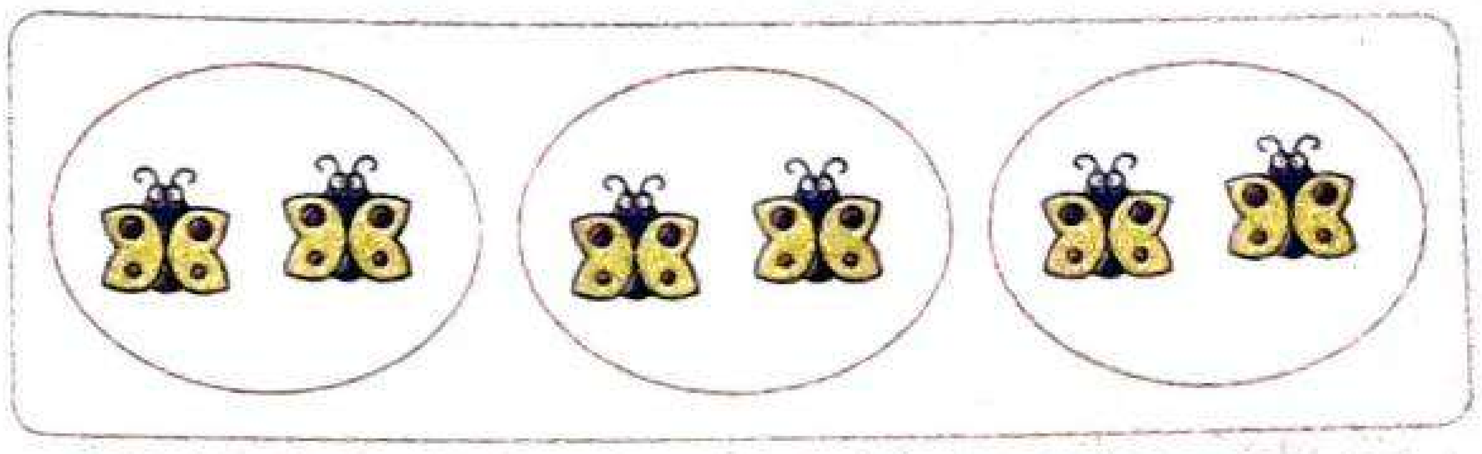
**Notes for parents**

- Ask your child to use objects to show you 2 groups of 5 and 5 groups of 2 and then find how many objects in all of each.

## Practice

Complete the following.





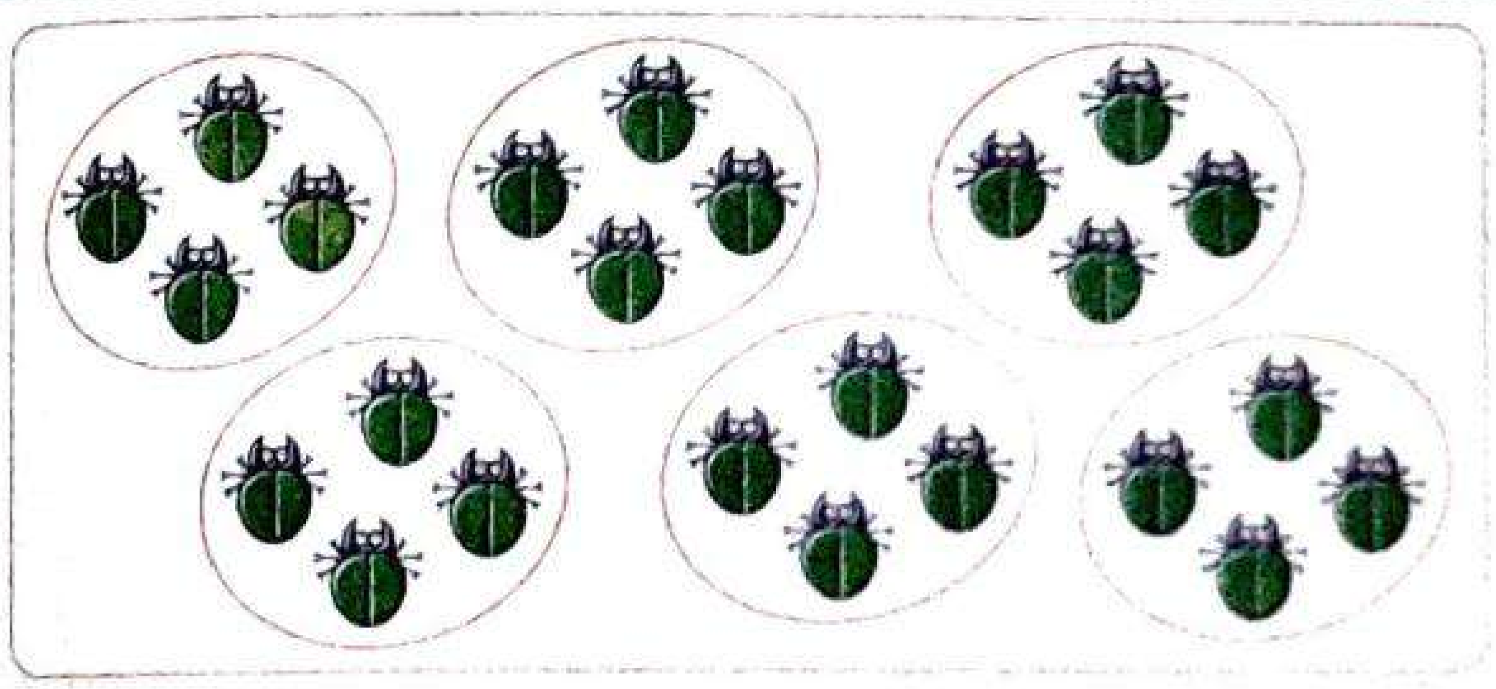
_____ groups of _____

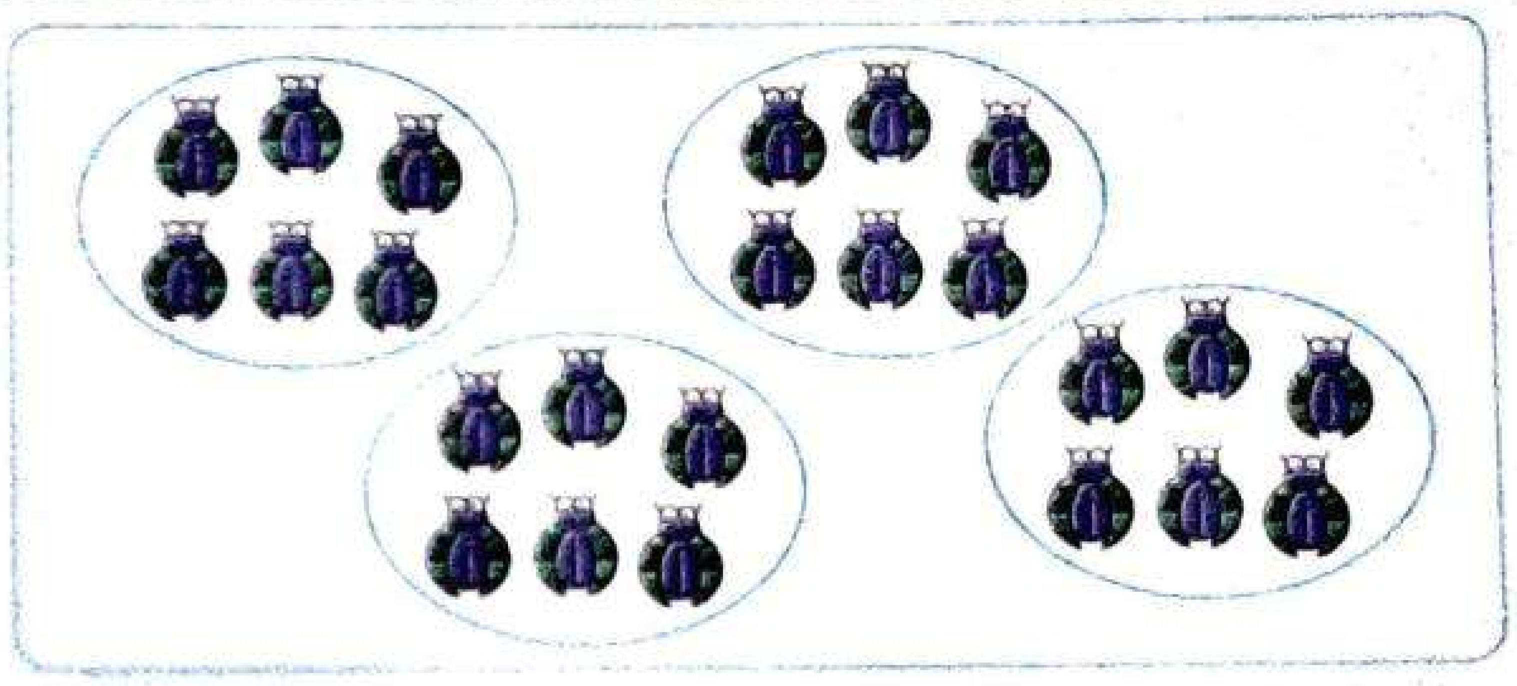
[ ] × [ ] = [ ]

_____ groups of _____

[ ] × [ ] = [ ]

[ ] × [ ] = [ ] × [ ]





_____ groups of _____

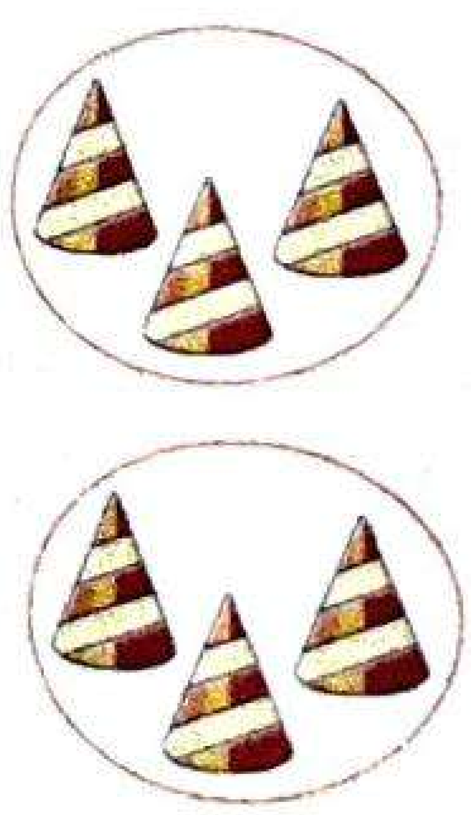
[ ] × [ ] = [ ]

_____ groups of _____

[ ] × [ ] = [ ]

[ ] × [ ] = [ ] × [ ]

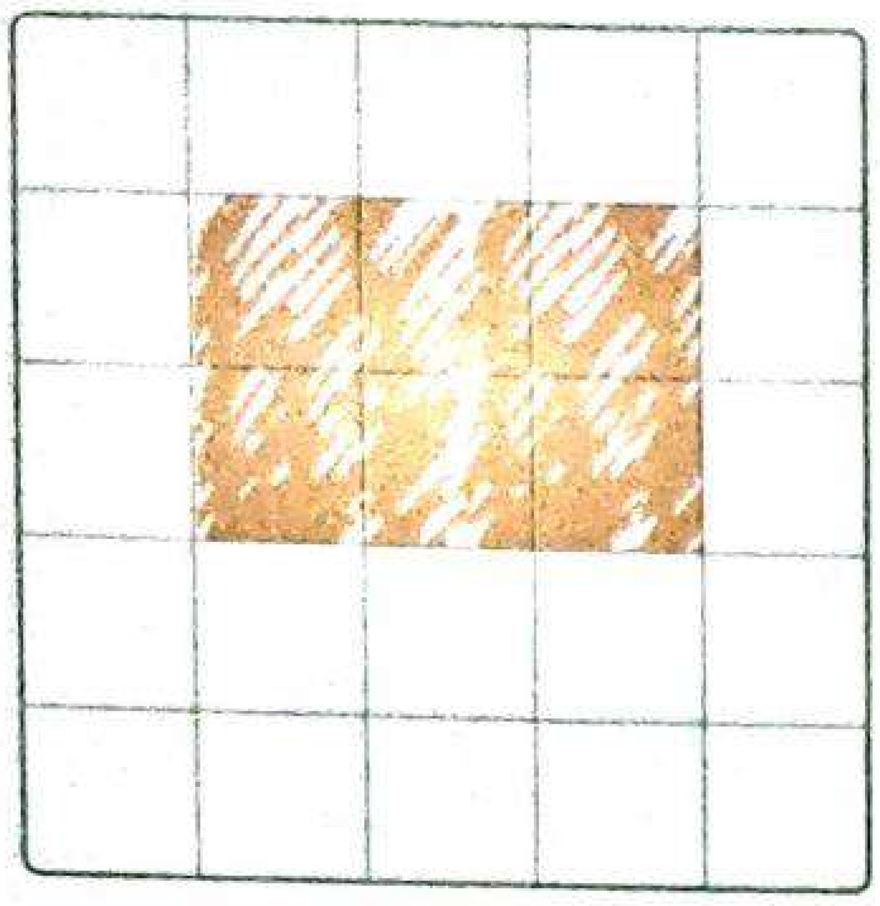
Write the multiplication sentence for each equal groups. Then draw the equal groups that shows the commutative property.





•Ask your child to use small objects to show you $3 \times 6$ and $6 \times 3$ with equal groups.

Draw the array on the grid according to its multiplication sentence. Write the product. The first one is done for you.



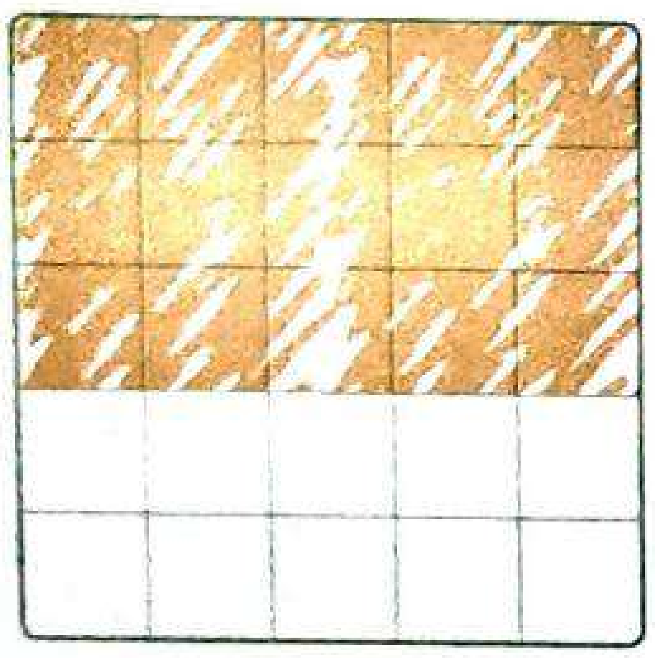
2 × 3 = 6

5 × 2 = ☐

4 × 5 = ☐

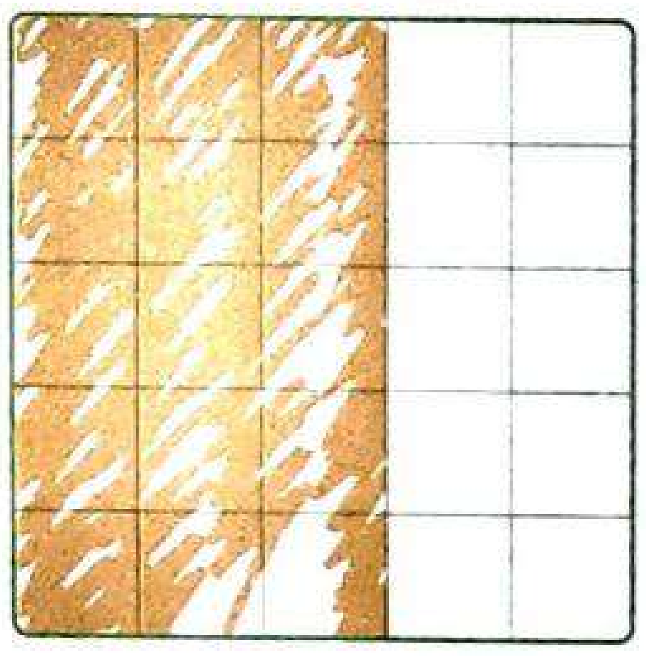
Draw the array on the grid according to its multiplications sentence. Then draw the array that shows the commutative property. Write the product. The first one is done for you.

3 rows of 5



3 × 5 = 15

5 rows of 3



5 × 3 = 15

2 rows of 4

2 × 4 = ☐

4 rows of 2

4 × 2 = ☐

3 rows of 4

3 × 4 = ☐

4 rows of 3

4 × 3 = ☐

1 row of 5

1 × 5 = ☐

5 rows of 1

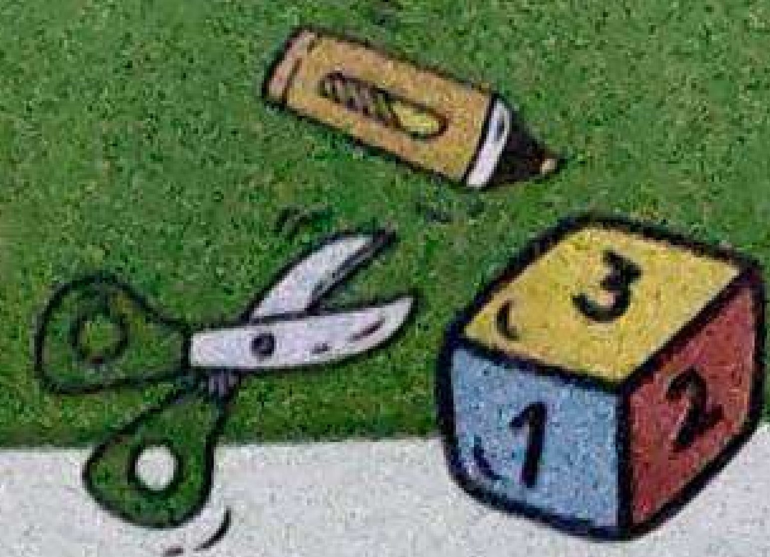
5 × 1 = ☐

**Notes for parents**

•Ask your child to say the repeated addition sentence of each.

Place a smiley face

# Activity
## Chapter 2

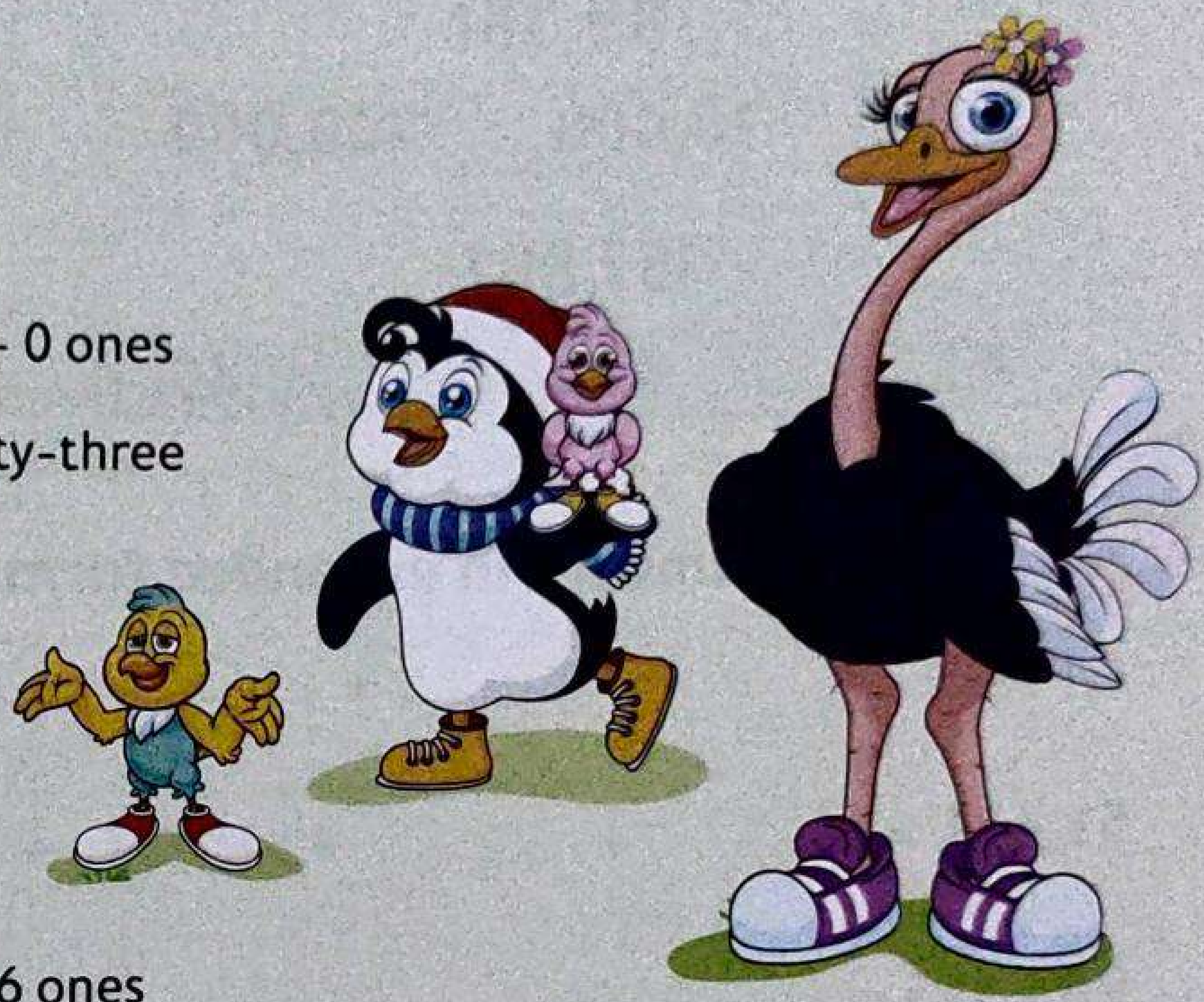


# Numbers Puzzle

**Find the sum or number to fill in the puzzle.**

### Across →

1. 2 hundreds + 6 tens + 8 ones
3. 3 hundreds + 9 tens + 7 ones
5. 4 thousands + 7 hundreds + 8 tens + 0 ones
7. three thousand, three hundred thirty-three
8. 9,000 + 30 + 5
9. six hundred twenty-two
11. 6 hundreds + 7 tens + 8 ones
13. 5,000 + 300 + 90
15. 8 thousands + 1 hundred + 2 tens + 6 ones
16. 90 + 100
17. two thousand, five hundred fifty



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. 2 | 6 | 2. 8 | ■ | ■ | 3. | | 4. |
| 9 | ■ | 5. | 6. | | | ■ | |
| 5 | ■ | 7. | | | | ■ | |
| 8. 9 | | | | ■ | 9. | 10. | |
| ■ | ■ | ■ | | ■ | ■ | | ■ |
| 11. | | 12. | ■ | 13. | 14. | | |
| 15. | | | | ■ | 16. | | |
| | ■ | 17. | | | | ■ | ■ |

### Down ↓

1. 2 thousands + 9 hundreds + 5 tens + 9 ones
2. eight thousand, four hundred thirty-three
3. 3,000 + 30 + 6
4. 7 thousands + 3 hundreds + 9 tens + 2 ones
6. 4 + 50 + 300 + 7,000
10. two thousand, five hundred ninety-nine
11. 600 + 80 + 5
12. 20 + 2 + 800
14. 3 hundreds + 1 ten



# Extra Practice

Chapter 2

**1** Circle the value of the colored digit.

| 2,349 | | |
|---|---|---|
| 200 | 2,000 | 20,000 |

| 230,456 | | |
|---|---|---|
| 30 | 30,000 | 300,000 |

| 789,361 | | |
|---|---|---|
| 700 | 70,000 | 700,000 |

| 65,348 | | |
|---|---|---|
| 500 | 50,000 | 5,000 |

| 157,842 | | |
|---|---|---|
| 4 | 400 | 40 |

| 841,903 | | |
|---|---|---|
| 1,000 | 10,000 | 100,000 |

**2** Write the numbers in expanded form.

3,712 = ______ + ______ + ______ + ______

51,484 = ______ + ______ + ______ + ______ + ______

963,515 = ______ + ______ + ______ + ______ + ______ + ______

7,068 = ______ + ______ + ______

28,103 = ______ + ______ + ______ + ______

**3** Write the numbers in standard form.

6,000 + 800 + 50 + 3 = ______

20,000 + 7,000 + 400 + 10 + 1 = ______

700,000 + 10,000 + 8,000 + 200 + 30 + 9 = ______

500 + 40 + 1,000 + 9 = ______

90 + 30,000 + 4,000 + 800 = ______

 • In this practice your child will review on all what he/she had learned in chapter 2

## 4 Write the following numbers in standard form.

Seven thousand , five hundred ninety-three

Forty-one thousand , six hundred twelve

Three hundred twenty-five thousand , seven hundred eighty-four

Two thousand , seven hundred five

Sixty thousand , two hundred sixty

Nine hundred eleven thousand , four hundred thirty-one

## 5 Compare using > , < or =.

| | | |
|---|---|---|
| 3,467 | ◯ | 3,164 |
| 300 thousands | ◯ | 3,000 hundreds |
| 132,045 | ◯ | 93,245 |
| 548,176 | ◯ | 548,173 |
| one hundred thousand | ◯ | 99,999 |
| 275 thousands and 6 | ◯ | 275,600 |
| 25,600 tens | ◯ | 256 thousands |
| 381,205 | ◯ | 83 thousands and 205 |



**6** Write the numbers in order from least to greatest.

7,482 | 54,658 | 954,201 | 12,158

The order is : ____________ , ____________ , ____________ , ____________

805,325 | 67,512 | 9,807 | 28,009

The order is : ____________ , ____________ , ____________ , ____________

100,700 | 8,781 | 99,359 | 98,359 | 100,702

The order is : ____________ , ____________ , ____________ , ____________ , ____________

35,657 | 6,009 | 304,518 | 610 | 403,851

The order is : ____________ , ____________ , ____________ , ____________ , ____________

**7** Write the numbers in order from greatest to least.

83,987 | 8,315 | 833,400 | 833,312

The order is : ____________ , ____________ , ____________ , ____________

69,270 | 499,145 | 9,325 | 9,654

The order is : ____________ , ____________ , ____________ , ____________

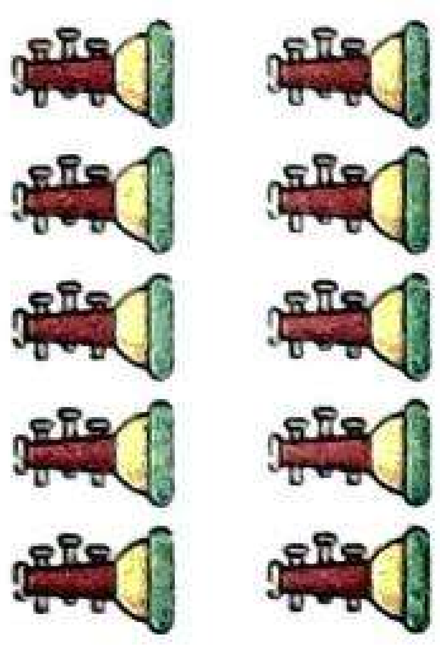
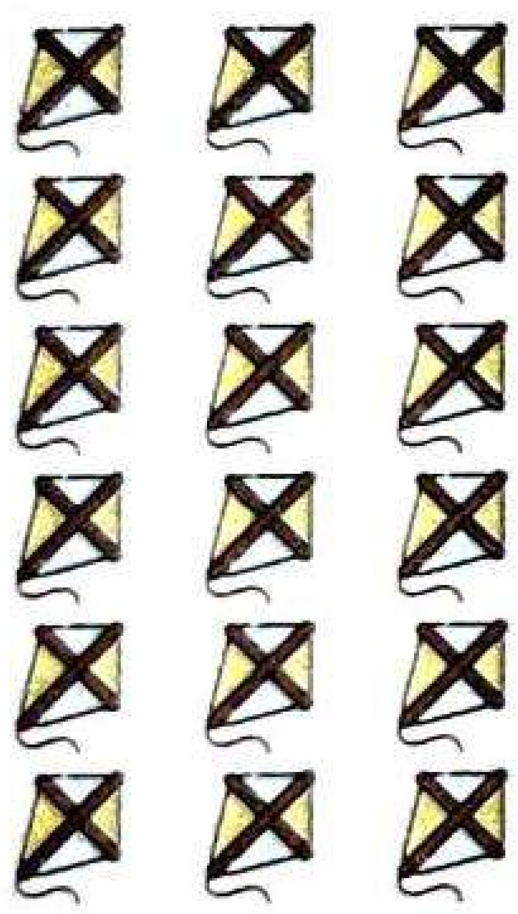
24,207 | 724,072 | 24,702 | 7,785 | 5,538

The order is : ____________ , ____________ , ____________ , ____________ , ____________

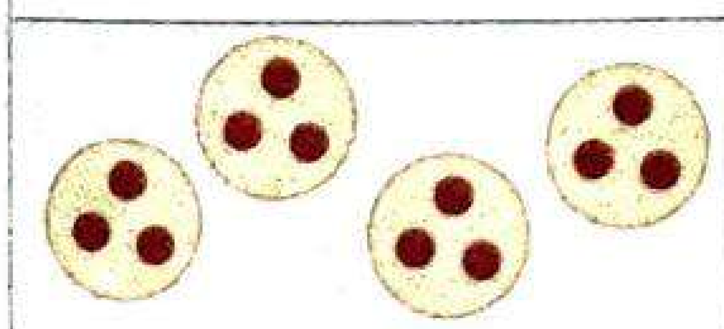
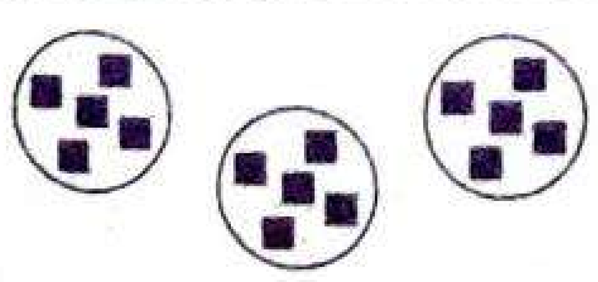
5,809 | 809,050 | 985 | 985,000 | 85,009

The order is : ____________ , ____________ , ____________ , ____________ , ____________

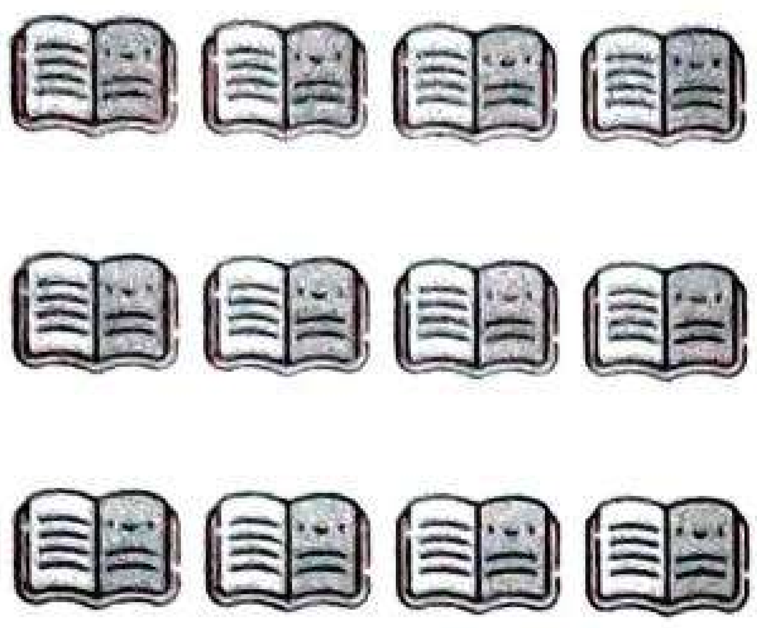
**8** **Complete.**

| Array | Model | Addition sentence | Multiplication sentence |
| --- | --- | --- | --- |
|  | ____ rows of ____ | ____ | ____ |
|  | ____ rows of ____ | ____ | ____ |
|  | ____ rows of ____ | ____ | ____ |

**9** **Complete.**

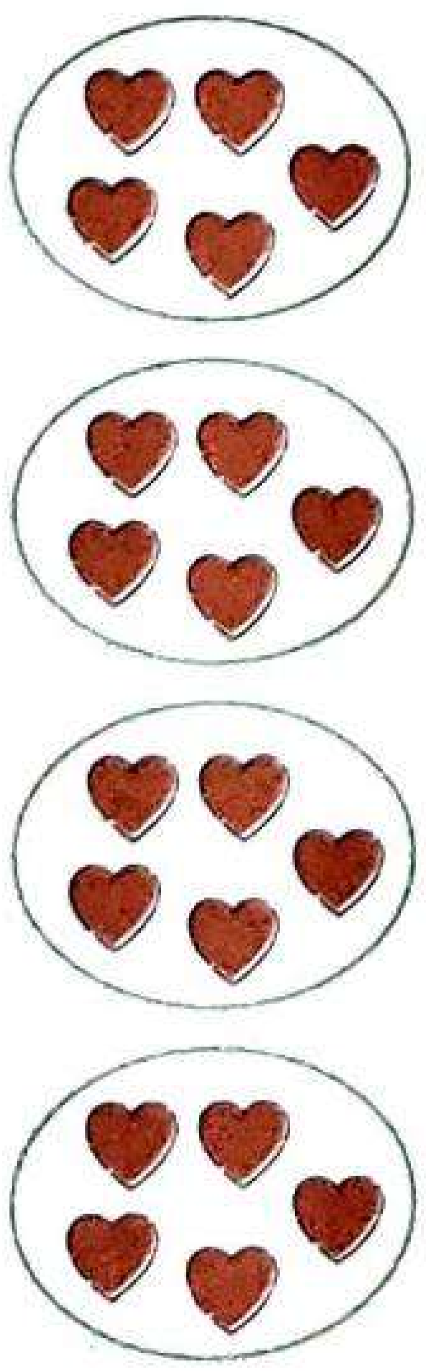
| Equal groups | Model | Addition sentence | Multiplication sentence |
| --- | --- | --- | --- |
|  | ____ groups of ____ | ____ | ____ |
|  | ____ groups of ____ | ____ | ____ |
|  | ____ groups of ____ | ____ | ____ |

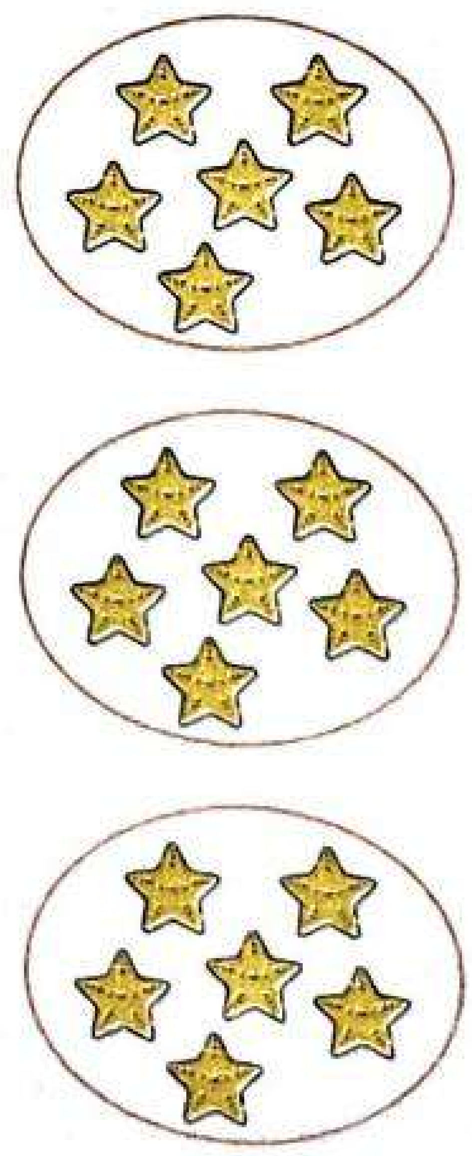
**10** Write the multiplication sentence for each array. Then draw the array that shows the commutative property.





**11** Write the multiplication sentence for each equal groups. Then draw the equal groups that show the commutative property.





# Assessment

## Chapter 2

**1** **Choose.**

① The value of the digit 3 in 439,012 is ______

- ◯ 300,000
- ◯ 30,000
- ◯ 3,000

② Two hundred fifty-eight thousand , seven hundred thirty-one in standard form is

- ◯ 731,258
- ◯ 285,731
- ◯ 258,731

③ 451,679 ◯ 89,879

◯ >  ◯ <  ◯ =

④ 120 thousands ◯ 1,200 hundreds

◯ >  ◯ <  ◯ =

⑤ 6,239 in expanded form is

- ◯ 6,000 + 200 + 30 + 9
- ◯ 9,000 + 300 + 20 + 6
- ◯ 2,000 + 600 + 90 + 3

⑥ $3 \times 5 =$ ______

- ◯ $3 \times 2$
- ◯ $5 \times 2$
- ◯ $5 \times 3$

**2**

ⓐ Arrange from the least to the greatest.

307,040 , 7,403 , 43,007 , 304,700

Order is : ______ , ______ , ______ , ______

ⓑ Arrange from the greatest to the least.

100,369 , 812,926 , 99,512 , 766 , 812,437

Order is : ______ , ______ , ______ , ______ , ______

**3** **Complete.**

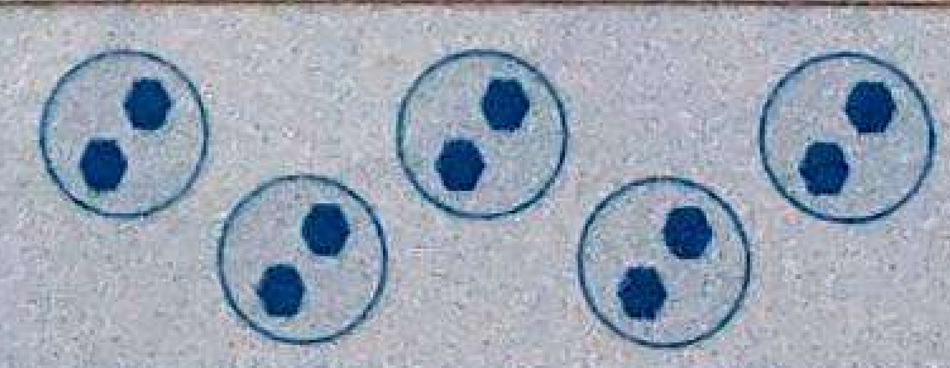


______ rows of ______

☐ × ☐

= ☐

**4** **Complete.**



______ groups of ______

☐ × ☐ = ☐

# Chapter 3



## Outcomes

**At the end of chapter three, your child will be able to:**

Lessons **21 & 22**

- Use a variety of strategies to solve multiplication story problems.
- Explain elements of multiplication story problems.
- Record a multiplication equation to match a story problem.
- Match multiplication equations to story problems.
- Write a multiplication story problem that matches a given equation.

Lesson **23**

- Explain the rules for multiplying by 0 and 1.
- Identify common multiples of 2 and 3.
- Predict common multiples of 2 and 3 greater than 120.
- Use evidence to justify and explain mathematical thinking.

Lesson **24**

- Identify the multiples of 5 and 10.
- Identify numerical patterns when multiplying by 5 and 10.
- Explain the relationship between skip counting and multiplication facts.

Lesson **25**

- Explore the relationship between multiples of 2, 3 and 6.
- Model the Commutative Property of Multiplication using arrays.
- Identify factor pairs using arrays.

Lessons **26 & 27**

- Explain the relationship between skip counting by 5s and telling time to 5-minute increments.
- Read and write time in 5-minute increments on an analog clock.
- Use a variety of strategies to tell time to 5-minute increments.

Lessons **28 & 29**

- Explain the relationship between sharing equally and dividing.
- Use a variety of strategies to solve division problems.
- Explain his/her thinking when solving division problems.

Lesson **30**

- Describe the relationship between factors and their product.
- Use the division symbol.
- Apply the relationship between multiplication and division to identify fact families.
- Solve division problems with one unknown.

## Key vocabulary

- Multiplication
- Multiples
- Commutative property of multiplication
- Time
- Fair share
- Symbol
- Product
- Skip counting
- Hour
- Quotient
- Equation
- Factors
- Array
- Minute
- Division
- Equal groups
- Pattern
- Clock
- Divide
- Fact family

Lessons

# 21 & 22

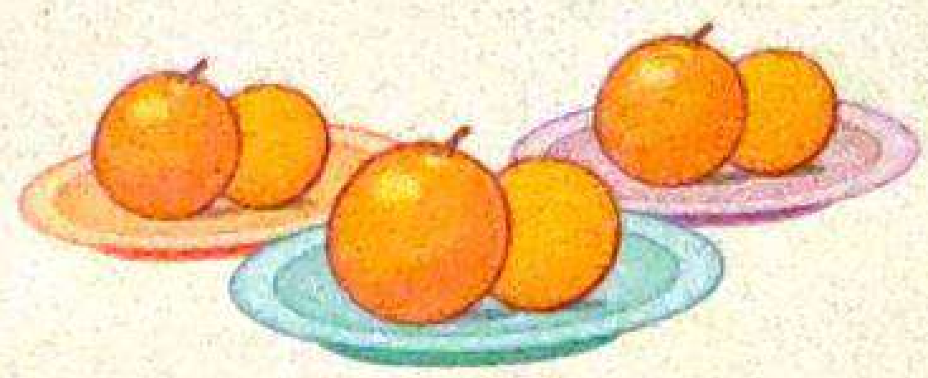
# Solving multiplication story problems

## Learn — Multiplication story problem

Eman has 3 plates.

There are 2 oranges in each plate.

How may oranges are there in all ?





- Understand
- Plan
- Solve

### Understand

- What do you want to find out ? Circle the question.
- What fact do you need ? Underline them.

### Plan

- Write a number sentence to solve. 3 × 2 = ?



### Solve

- You can use one of these different ways to solve the problem.

| Using repeated addition | Using skip counting | Using objects |
|---|---|---|
| 2 + 2 + 2 = 6 | 2 , 4 , 6 (+ 2, + 2) | This is a 3 rows of 2 array. There is 6 objects. |

So, $3 \times 2 = 6$

**Notes for parents**

- In these lessons your child will use one of the strategies he/she has studied to solve multiplication story problems.

## Check

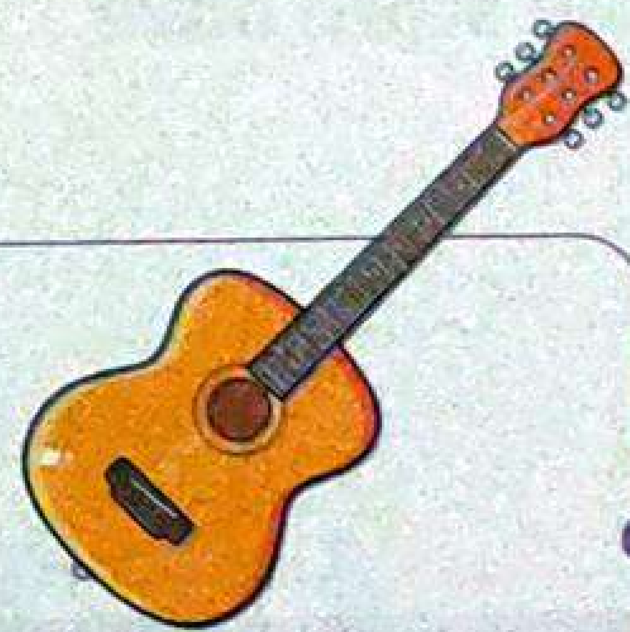
**Match each problem to the suitable multiplication sentence.**

- Jana bought 3 packs of ping-pong balls. Each pack has 5 balls.
  **How many balls are there ?**



- Andy downloaded 3 games onto his tablet. The next day he downloaded 3 more.
  **How many games has he downloaded ?**





- A guitar has 6 strings.
  **How many strings are there in 2 guitars ?**

- There are 5 apples in a box.
  **How many apples in 2 boxes ?**



- $6 \times 2 = 12$
- $3 \times 5 = 15$
- $2 \times 5 = 10$
- $3 \times 2 = 6$

• Ask your child to read each story problem carefully to determine the suitable multiplication sentence.

## Practice

Remember
- Understand
- Plan
- Solve

Read and solve. You may use counters to solve.

Work area

- Ahmed has 2 packets of sweets each with 5 pieces of sweets in.




**How many pieces of sweets Ahmed has ?**

______________________

- A carpet store has 3 commercials every hour on a local television station.



**How many commercials will the store have in 7 hours ?**

______________________

- An apartment building has 4 floors. There are 3 apartments per floor.



**How many apartments are in the building ?**

______________________

**Put the products from the problems above in order from least to greatest.** ________ , ________ , ________

Notes for parents

- Help your child to understand , plan and solve the story problems.

- A jar of marbles holds 8 marbles.



**How many marbles are there in 4 jars ?**

______________________

Work area



- Adam runs 2 hours every day.





**What is the number of running hours in 9 days ?**

______________________

- Rana saw 6 dogs in a garden.



**How many legs do the 6 dogs have ?**

______________________

**Put the products from the problems above in order from greatest to least.** ________ , ________ , ________

• Help your child solve the multiplication story problems using one of the strategies.

Look , write and solve.



Use the picture. Tell multiplication stories and solve them.
You may use counters. The first one in done for you.

There are 2 girls.

Each girl has 3 balloons.

**How many balloons do they have together ?**

$2 \times 3 = 6$ balloons.

*Math tip*

*To create a multiplication story , be sure that it is containing multiple equal groups.*

**Work area**

• Make another story with multiplication problem, then ask your child to solve it.

## Challenge

- Write a multiplication story for each multiplication sentence. Then solve it. You may use counters to solve.

Work area

4 × 5

3 × 6

2 × 7

- Think how to solve the multiplication problem 11 × 12.

Work area

**Notes for parents**

- Help your child to create a multiplication story problem and be sure that it is containing some equal groups.

Place a smiley face

# Lesson 23

# Multiples of 2 , 3 and 4

**Vocabulary**

*Multiple*
*The product of a given whole number by any other*

## Learn — Multiples of 2

- You can use a 120 chart to find the **multiples**.
- **Skip count by 2 on the chart when 2 is a factor.**

**For example :** To find $7 \times 2$

Start at 2 and shade 7 boxes. You can shade each box you land on to see pattern, you will land on 14.

Start →

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

**So,** $7 \times 2 = 14$

7 ↑ Factor, 2 ↑ Factor, 14 ↑ Product

- **We can represent skip counting by 2 as a multiplication equation.**

$2 \times 1 = 2$
$2 \times 2 = 4$
$2 \times 3 = 6$
$2 \times 4 = 8$
$2 \times 5 = 10$
$2 \times 6 = 12$
$2 \times 7 = 14$
$2 \times 8 = 16$
$2 \times 9 = 18$
$2 \times 10 = 20$
↓ ↓ ↓
...... × ...... = ......

Multiples of 2 song



Each of 2, 4, 6, 8, 10, 12, 14, 16, 18 and 20 is a multiple of 2.

• Help your child skip counting by 2 on the 120 chart.

## Check

Play game

Use the chart. Find each product.

$2 \times 3 = \square$ $2 \times 8 = \square$ $2 \times 6 = \square$

$2 \times 1 = \square$ $5 \times 2 = \square$ $2 \times 2 = \square$

$$\begin{array}{r} 2 \\ \times\ 10 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ \times\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ \times\ 9 \\ \hline \end{array}$$

## Practice

Use the chart. Ring the multiples of 2.

15 24 32 17 50 44

Use the chart.

- Write the multiples of 2 up to 30.

______________________________

______________________________

- Write the multiples of 2 between 31 and 55.

______________________________

______________________________

**Notes for parents**

- Help your child to discover the ones digit is 0, 2, 4, 6, 8 for the multiples of 2.

## Learn  Multiples of 3

- Using a 120 chart, skip count by 3 when 3 is a factor and shade in the numbers you land on.

**For example :** To find $8 \times 3$

Start at 3 and shade 8 boxes. You can shade each box you land on to see pattern, you will land on 24.

So, $8 \times 3 = 24$

8 → Factor, 3 → Factor, 24 → Product

Start →

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

- **We can represent skip counting by 3 as a multiplication equation.**

$3 \times 1 = 3$

$3 \times 2 = 6$

$3 \times 3 = 9$

$3 \times 4 = 12$

$3 \times 5 = 15$

$3 \times 6 = 18$

$3 \times 7 = 21$

$3 \times 8 = 24$

$3 \times 9 = 27$

$3 \times 10 = 30$

↓ ↓ ↓

...... × ...... = ......

Multiples of 3 song

Each of 3, 6, 9, 12, 15, 18, 21, 24, 27 and 30 is a multiple of 3



- Help your child skip counting by 3 on the 120 chart.

## Check

Play game

Use the chart. Find each product.

3 × 5 = ____

3 × 3 = ____

3 × 6 = ____

3 × 7 = ____

3 × 2 = ____

10 × 3 = ____

$$\begin{array}{r} 3 \\ \times\ 1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times\ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times\ 4 \\ \hline \end{array}$$

## Practice

Use the chart. Ring the multiples of 3.

22 18 40 20 33 13

Use the chart.

- Write the multiples of 3 up to 40.

____________________

____________________

- Write the multiples of 3 between 41 and 50.

____________________

____________________

**Notes for parents**

• Help your child to find the product using different strategies as skip counting and arrays.

Join the equal results.

| $2 \times 5$ | $2 \times 3$ | $3 \times 3$ | $2 \times 9$ | $4 \times 3$ |
|---|---|---|---|---|
| $6 + 3$ | $3 \times 6$ | $6 \times 2$ | $5 + 5$ | $3 \times 2$ |

Find each product.

$3 \times 7$ = ____  $2 \times 4$ = ____  $2 \times 8$ = ____  $3 \times 8$ = ____

$1 \times 2$ = ____  $5 \times 3$ = ____  $2 \times 2$ = ____  $3 \times 4$ = ____

$1 \times 3$ = ____  $3 \times 9$ = ____  $4 \times 2$ = ____  $7 \times 2$ = ____

Choose the correct answer.

$2 \times$ ____ $= 10$

- ○ 10
- ○ 5
- ○ 3
- ○ 8

____ $\times 3 = 30$

- ○ 6
- ○ 8
- ○ 10
- ○ 5

____ $\times 2 = 18$

- ○ 8
- ○ 16
- ○ 7
- ○ 9

$2 \times$ ____ $= 4 + 4 + 4$

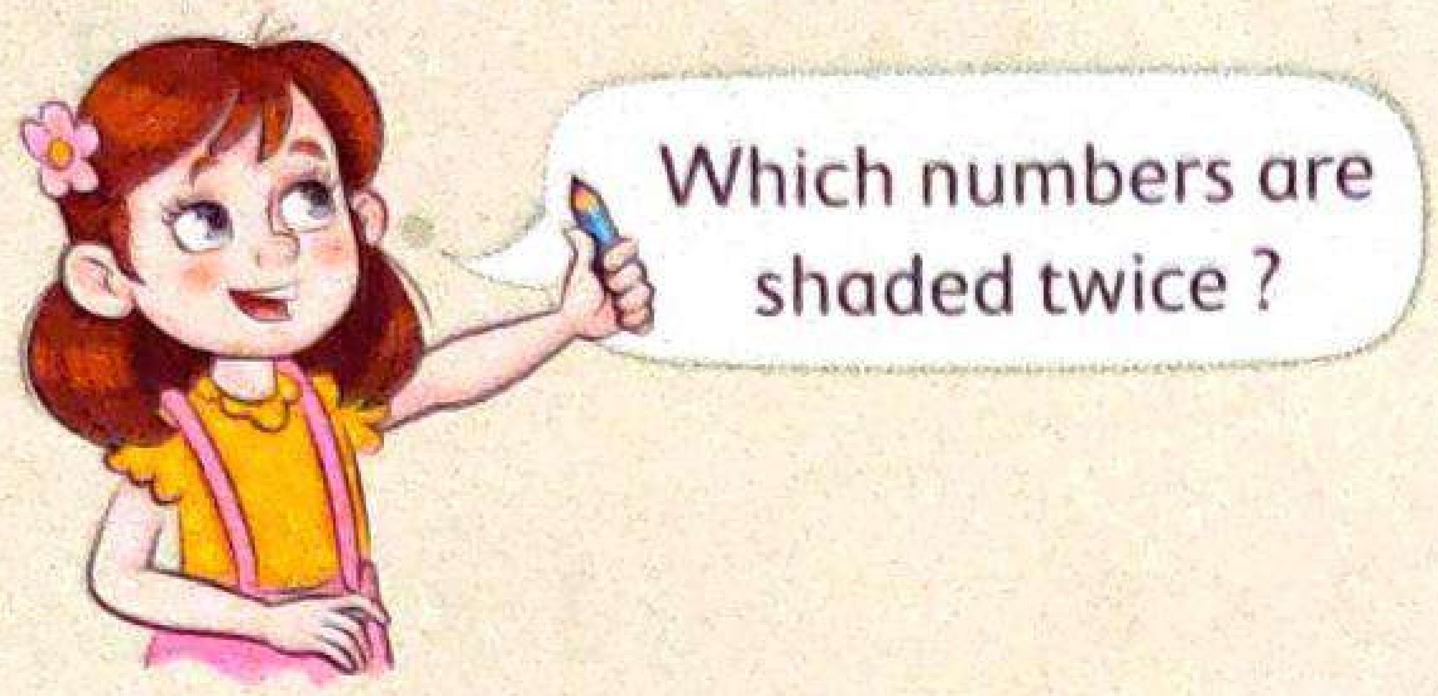
- ○ 2
- ○ 4
- ○ 6
- ○ 8

• Help your child to solve this page using different strategies as skip counting on 120 chart and arrays.

## Learn — Common multiples of 2 and 3

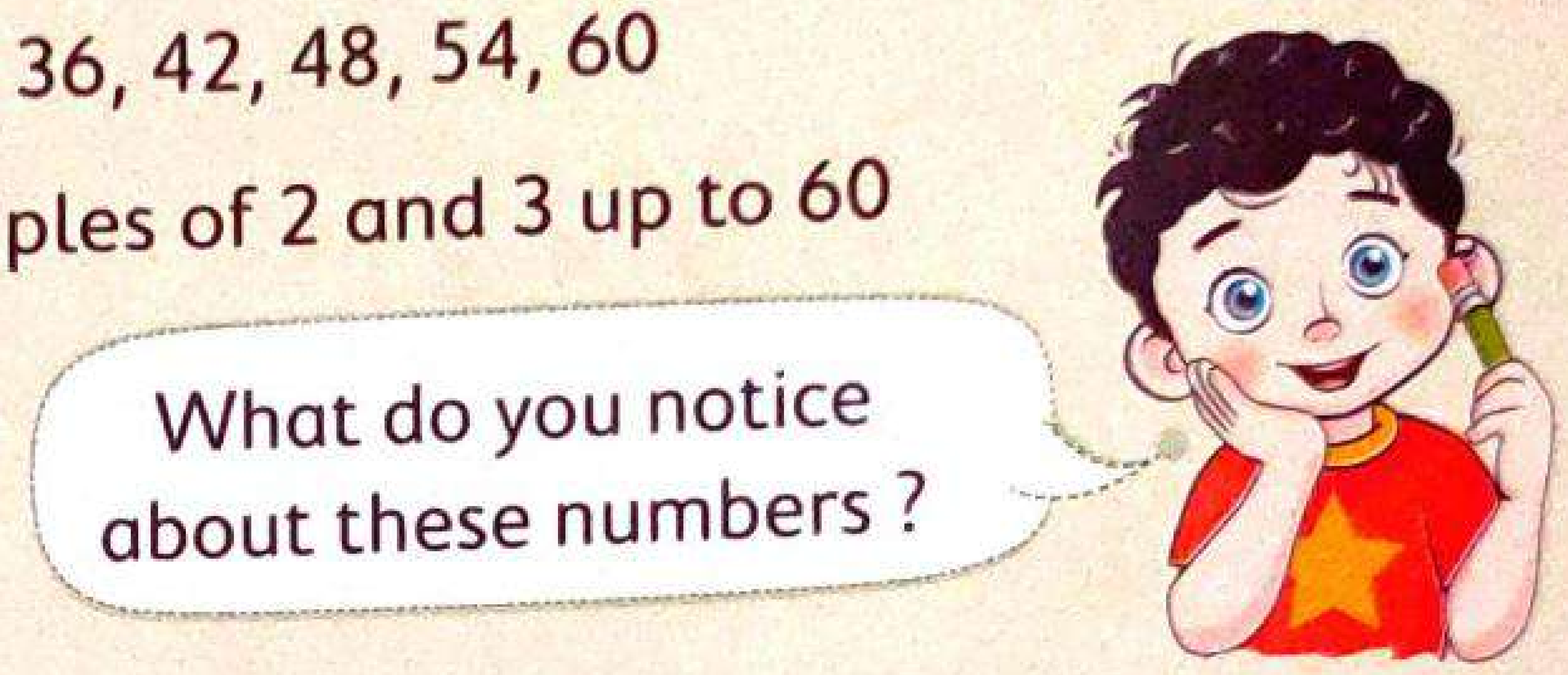
- Use a 120 chart.
- Skip count by 2 to find multiples of 2 up to 60. Shade each multiple of 2 red.
- Skip count by 3 to find multiples of 3 up to 60. Shade each multiple of 3 blue.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |




- The numbers are 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

  These numbers are common multiples of 2 and 3 up to 60




- The numbers are increasing in the same pattern, its rule is **+ 6**

**So,** you can predict the next common multiple

**60 + 6 = 66**

## Check

**Use the chart. Ring the multiples of 2 and 3 together.**

| 23 | 12 | 15 | 18 | 30 | 66 | 33 |
|---|---|---|---|---|---|---|
| 22 | 48 | 96 | 100 | 54 | 27 | 32 |

**Notes for parents**

- Help your child to find 3 common multiples of 2 and 3 greater than 70.

## Practice

**Use the chart.**

- Write three common multiples of 2 and 3 greater than 40 and smaller than 70.

______________________________________________

______________________________________________

- Write the common multiples of 2 and 3 between 80 and 100.

______________________________________________

______________________________________________

- **Critical thinking**

  Do you think the common multiples of 2 and 3 are multiples of 6 ? Explain.

______________________________________________

______________________________________________

______________________________________________

## Challenge

- If you cross off all the multiples of 7 on this chart.

  You will make a diagonal line.

  What number's multiples make 2 diagonal lines on this chart ?

______________________________



| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 |

• Help your child to find the smallest common multiple of 2 and 3 of 3-digit number.

## Learn   Multiplying by 1 and 0

- Ahmed has 5 baskets.
  There is 1 orange in each basket.
  How many oranges are there in all ?



$5 \times 1 = 5$ oranges

- Rasha has 3 baskets.
  There is 0 oranges in each basket.
  How many oranges are there in all ?



$3 \times 0 = 0$ oranges



*Any number multiplied by 1 equals the same number.*

*Any number multiplied by 0 equals 0.*

## Check

> *Remember*
> *The multiplication operation is commutative.*

**Find each product.**

$5 \times 1 =$ ____  $4 \times 0 =$ ____  $9 \times 1 =$ ____

$0 \times 5 =$ ____  $7 \times 1 =$ ____  $12 \times 0 =$ ____

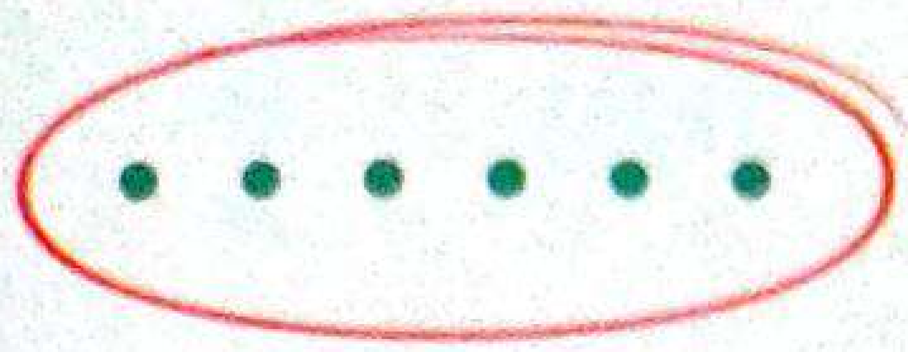
$$\begin{array}{r} 6 \\ \times \quad 0 \\ \hline \end{array} \qquad \begin{array}{r} 0 \\ \times \quad 8 \\ \hline \end{array} \qquad \begin{array}{r} 12 \\ \times \quad 1 \\ \hline \end{array}$$

**Notes for parents**

- Ask your child which is greater, the product of his/her age times 0 or the product of his/her age times 1 ?

## Practice

Draw a picture to show each grouping. The first one is done for you.

| 1 group of 6 dots<br> | 6 groups of 1 dot |
|---|---|
| 0 groups of 5 dots | 3 groups of 1 dot |
| 4 groups of 0 dots | 0 groups of 2 dots |

Complete. Write (+) or (×).

| | | |
|---|---|---|
| 8 ◯ 1 = 9 | 9 ◯ 1 = 9 | 0 ◯ 5 = 5 |
| 2 ◯ 0 = 2 | 0 ◯ 7 = 0 | 1 ◯ 7 = 8 |

## Challenge

- Three numbers, their sum equals their product.
  What are these numbers ?

_______________________________________________

_______________________________________________

• Remind your child about the difference between the addition and multiplication.

# Learn

## Multiples of 4

- Using a 120 chart, skip count by 4 when 4 is a factor and shade in the numbers you land on.

Start ↓

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | **(4)** | 5 | 6 | 7 | **8** | 5 | 10 |
| 11 | **12** | 13 | 14 | 15 | **16** | 17 | 18 | 19 | **20** |
| 21 | 22 | 23 | **24** | 25 | 26 | 27 | **28** | 29 | 30 |
| 31 | **32** | 33 | 34 | 35 | **36** | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

**For example :** To find $9 \times 4$

Start at 4 and shade 9 boxes.

You can shade each box you land on to see pattern, you will land on 36.

**So,** $9 \times 4 = 36$

9 → Factor, 4 → Factor, 36 → Product

- **We can represent skip counting by 4 as a multiplication equation.**

$4 \times 1 = 4$

$4 \times 2 = 8$

$4 \times 3 = 12$

$4 \times 4 = 16$

$4 \times 5 = 20$

$4 \times 6 = 24$

$4 \times 7 = 28$

$4 \times 8 = 32$

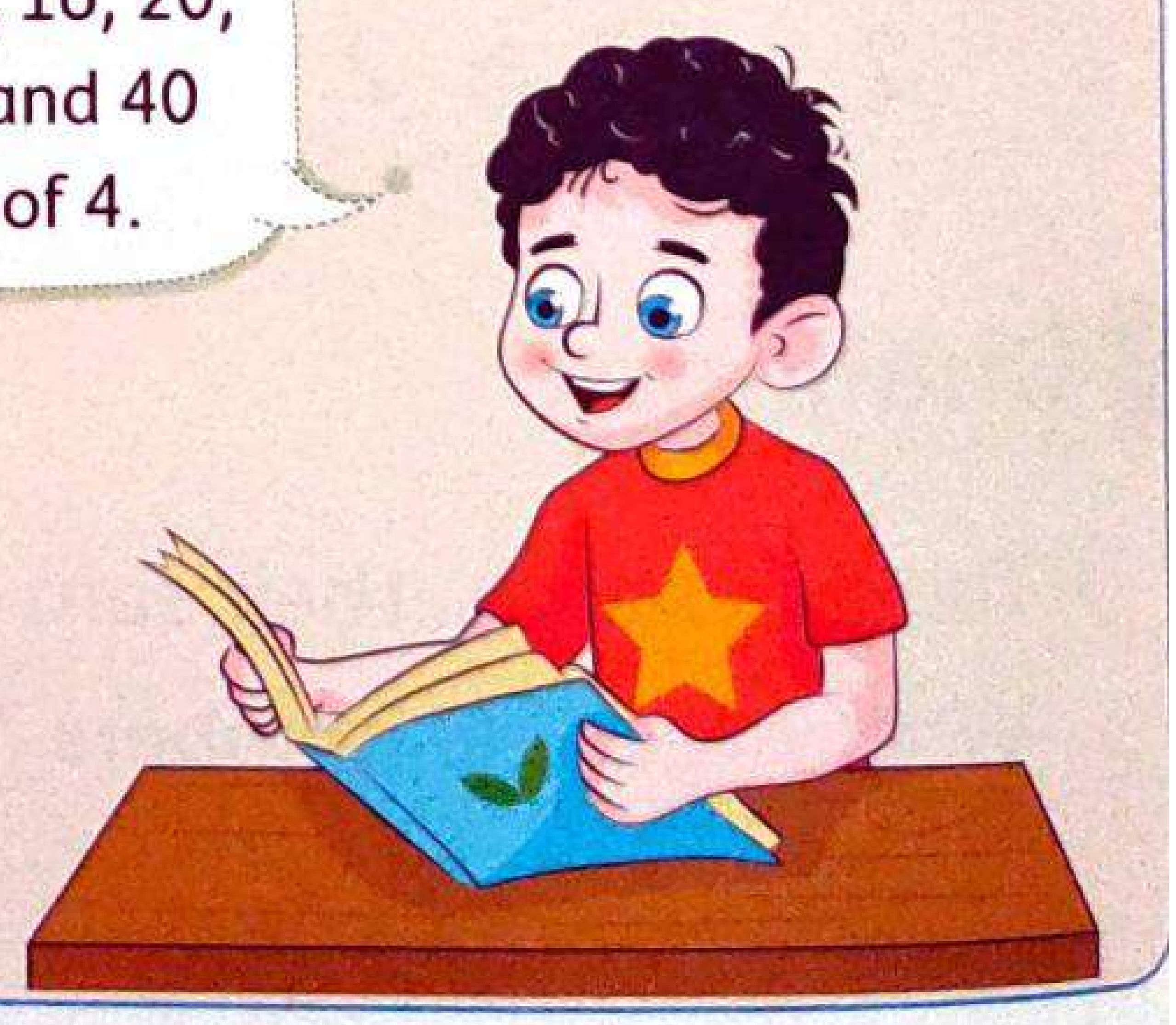
$4 \times 9 = 36$

$4 \times 10 = 40$

...... × ...... = ......

Multiples of 4 song

Each of 4, 8, 12, 16, 20, 24, 28, 32, 36 and 40 is a multiple of 4.



**Notes for parents**

- Help your child skip counting by 4 on the 120 chart.

## Check

Play game

Use the chart. Find each product.

$4 \times 7$ = ____

$4 \times 3$ = ____

$4 \times 4$ = ____

$2 \times 4$ = ____

$4 \times 10$ = ____

$6 \times 4$ = ____

$$\begin{array}{r} 4 \\ \times \ 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times \ 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times \ 1 \\ \hline \end{array}$$

## Practice

Color the multiplication sentences in each row that have the same product.

| | | |
|---|---|---|
| $4 \times 3$ | $3 \times 5$ | $2 \times 6$ |
| $2 \times 10$ | $8 \times 3$ | $4 \times 6$ |
| $3 \times 6$ | $9 \times 2$ | $4 \times 4$ |
| $4 \times 0$ | $0 \times 3$ | $4 \times 1$ |

• Ask your child to find the product of his/her age times 4.

Place a smiley face

Lesson

# 24

# Multiples of 5 , 10 , 6 , 7 and 8

## Learn — Multiples of 5

- Using a 120 chart, skip count by 5 when 5 is a factor and shade in the numbers you land on.

**For example :** To find $6 \times 5$

Start at 5 and shade 6 boxes.

You can shade each box you land on to see patterns, you will land on 30.

So, $6 \times 5 = 30$

(6 = Factor, 5 = Factor, 30 = Product)

Start → 5

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

- **We can represent skip counting by 5 as a multiplication equation.**



$5 \times 1 = 5$

$5 \times 2 = 10$

$5 \times 3 = 15$

$5 \times 4 = 20$

$5 \times 5 = 25$

$5 \times 6 = 30$

$5 \times 7 = 35$

$5 \times 8 = 40$

$5 \times 9 = 45$

$5 \times 10 = 50$

...... × ...... = ......

Each of 5, 10, 15, 20, 25, 30, 35, 40, 45 and 50 is a multiple of 5



Multiples of 5 song

**Notes for parents**

- Help your child to skip counting by 5 on the 120 chart.

## Check

Play game

Use the chart. Find each product.

$5 \times 6 = $ ___ $5 \times 4 = $ ___ $5 \times 1 = $ ___

$5 \times 9 = $ ___ $2 \times 5 = $ ___ $5 \times 7 = $ ___

$$\begin{array}{r} 5 \\ \times \ 5 \\ \hline \end{array} \qquad \begin{array}{r} 5 \\ \times \ 8 \\ \hline \end{array} \qquad \begin{array}{r} 3 \\ \times \ 5 \\ \hline \end{array}$$

## Practice

Use the chart. Choose. The first one is done for you.

| | |
|---|---|
| 15 is a multiple of 5<br>(Yes) No | 70 is a multiple of 5<br>Yes No |
| 53 is a multiple of 5<br>Yes No | 65 is a multiple of 5<br>Yes No |
| 5 is a multiple of 5<br>Yes No | 1 is a multiple of 5<br>Yes No |

**Critical thinking**

How would you use $12 \times 5 = 60$ to find $13 \times 5$ ?

• Help your child to discover that the ones digit for the multiple of 5 is 0 or 5.

## Learn Multiples of 10

- Using a 120 chart, skip count by 10 when 10 is a factor and shade in the numbers you land on.

Start → 10

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

**For example :** To find $5 \times 10$

Start at 10 and shade 5 boxes. You can shade each box you land on to see patterns, you will land on 50.

**So,** $5 \times 10 = 50$

5 ↑ Factor, 10 ↑ Factor, 50 ↑ Product

- **We can represent skip counting by 10 as a multiplication equation.**

$10 \times 1 = 10$

$10 \times 2 = 20$

$10 \times 3 = 30$

$10 \times 4 = 40$

$10 \times 5 = 50$

$10 \times 6 = 60$

$10 \times 7 = 70$

$10 \times 8 = 80$

$10 \times 9 = 90$

$10 \times 10 = 100$

↓ ↓ ↓

....... × ..... = ......

Each of 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 is a multiple of 10



**Notes for parents**

- Help your child to skip counting by 10 on the 120 chart.

## Check

Use the chart. Find each product.

$10 \times 6 = \square$ $10 \times 9 = \square$ $10 \times 3 = \square$

$10 \times 8 = \square$ $1 \times 10 = \square$ $10 \times 7 = \square$

$$\begin{array}{r} 10 \\ \times \quad 4 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ \times \quad 10 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ \times \quad 10 \\ \hline \end{array}$$

## Practice

Join the equal results.

| $10 \times 4$ | $4 \times 5$ | $2 \times 5$ | $5 \times 6$ | $10 \times 5$ |
|---|---|---|---|---|
| $3 \times 10$ | $5 \times 10$ | $10 \times 2$ | $8 \times 5$ | $10 \times 1$ |

## Challenge

- Do you think multiples of 10 are also multiples of 2 and of 5 ? Explain.

______________________________________________

______________________________________________

• Help your child to discover that the ones digit for the multiples of 10 is 0.

Find each product.

$4 \times 7$ = ____ $5 \times 6$ = ____ $10 \times 8$ = ____ $8 \times 4$ = ____

$3 \times 5$ = ____ $7 \times 10$ = ____ $4 \times 5$ = ____ $5 \times 9$ = ____

| 6 × 4 | 7 × 5 | 1 × 10 | 4 × 10 | 9 × 10 | 10 × 5 |
|---|---|---|---|---|---|
| ____ | ____ | ____ | ____ | ____ | ____ |

Put > , = or <. The first one is done for you.

| | | | | | |
|---|---|---|---|---|---|
| $3 \times 5$ (15) | < | $4 \times 6$ (24) | $5 \times 7$ | ◯ | $4 \times 8$ |
| $10 \times 3$ | ◯ | $6 \times 5$ | $4 + 5$ | ◯ | $4 \times 5$ |
| $2 \times 8$ | ◯ | $4 \times 4$ | $5 \times 5$ | ◯ | $4 \times 10$ |

## Challenge

- Complete each of the following with two different answers.

| | |
|---|---|
| ____ × ____ = 12 | ____ × ____ = 20 |
| ____ × ____ = 12 | ____ × ____ = 20 |
| ____ × ____ = 18 | ____ × ____ = 30 |
| ____ × ____ = 18 | ____ × ____ = 30 |

Notes for parents

- Train your child to use different ways to calculate the product.

## Learn Common multiples of 5 and 10

- Using a 120 chart.
- Draw a circle around each multiple of 5 and a triangle on each multiple of 10 on this chart up to 60.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

- **Which numbers are marked twice on the chart ?**
  - The numbers are 10, 20, 30, 40, 50, 60.
  - These numbers are common multiples of 5 and 10.



- **What do you notice about these numbers ?**
  - The ones digit is 0

## Check

**Circle the common multiple of 5 and 10.**

| | | | |
|---|---|---|---|
| 15 | 50 | 55 | 65 |
| 70 | 25 | 40 | 105 |
| 110 | 90 | 85 | 30 |

• Ask your child to find common multiple of 5 and 10 greater than 60.

## Practice

Use the chart.

- Write three common multiples of 5 and 10 greater than 63 and smaller than 98.

- Write three common multiples of 5 and 10 between 99 and 125.

- **Critical thinking.**

  Heba says that 37 is a multiple of 10 because the digits 3 and 7 add to 10.

  Do you agree ? Explain.



**Notes for parents**

- Remind your child about the relation between addition and multiplication.

## Multiples of 6, 7 and 8

- Using a 120 chart, skip count by 6, 7 or 8 when 6, 7 or 8 is a factor and shade in the numbers you land on.



| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |

- **We can represent skip counting by 6, 7 and 8 as a multiplication equation.**

| 6 | 7 | 8 |
|---|---|---|
| 6 × 1 = **6** | 7 × 1 = **7** | 8 × 1 = **8** |
| 6 × 2 = **12** | 7 × 2 = **14** | 8 × 2 = **16** |
| 6 × 3 = **18** | 7 × 3 = **21** | 8 × 3 = **24** |
| 6 × 4 = **24** | 7 × 4 = **28** | 8 × 4 = **32** |
| 6 × 5 = **30** | 7 × 5 = **35** | 8 × 5 = **40** |
| 6 × 6 = **36** | 7 × 6 = **42** | 8 × 6 = **48** |
| 6 × 7 = **42** | 7 × 7 = **49** | 8 × 7 = **56** |
| 6 × 8 = **48** | 7 × 8 = **56** | 8 × 8 = **64** |
| 6 × 9 = **54** | 7 × 9 = **63** | 8 × 9 = **72** |
| 6 × 10 = **60** | 7 × 10 = **70** | 8 × 10 = **80** |
| ↓ ↓ ↓ | ↓ ↓ ↓ | ↓ ↓ ↓ |
| ...... × ..... = ...... | ...... × ..... = ...... | ...... × ..... = ...... |

Multiples of 6 song

Multiples of 7 song

Multiples of 8 song

- Help your child to skip counting by 6, 7 and 8 on the 120 chart.

## Check

Play game Play game Play game

Use the chart. Find each product.

| | | |
|---|---|---|
| 6 × 6 = ☐ | 6 × 5 = ☐ | 6 × 9 = ☐ |
| 7 × 8 = ☐ | 7 × 4 = ☐ | 7 × 7 = ☐ |
| 8 × 5 = ☐ | 8 × 9 = ☐ | 8 × 6 = ☐ |

## Practice

Find the product.

| | | |
|---|---|---|
| 6 × 5 = ____ | 7 × 4 = ____ | 8 × 2 = ____ |
| 6 × 8 = ____ | 7 × 3 = ____ | 8 × 7 = ____ |
| 6 × 4 = ____ | 7 × 7 = ____ | 8 × 4 = ____ |
| 6 × 6 = ____ | 7 × 6 = ____ | 8 × 6 = ____ |
| 6 × 7 = ____ | 7 × 2 = ____ | 8 × 3 = ____ |
| 6 × 1 = ____ | 7 × 1 = ____ | 8 × 8 = ____ |
| 6 × 3 = ____ | 7 × 9 = ____ | 8 × 5 = ____ |
| 6 × 2 = ____ | 7 × 5 = ____ | 8 × 1 = ____ |
| 6 × 9 = ____ | 7 × 8 = ____ | 8 × 9 = ____ |
| 6 × 10 = ____ | 7 × 11 = ____ | 8 × 12 = ____ |

**Notes for parents**

- Train your child to use different ways to calculate the product.

Place a smiley face

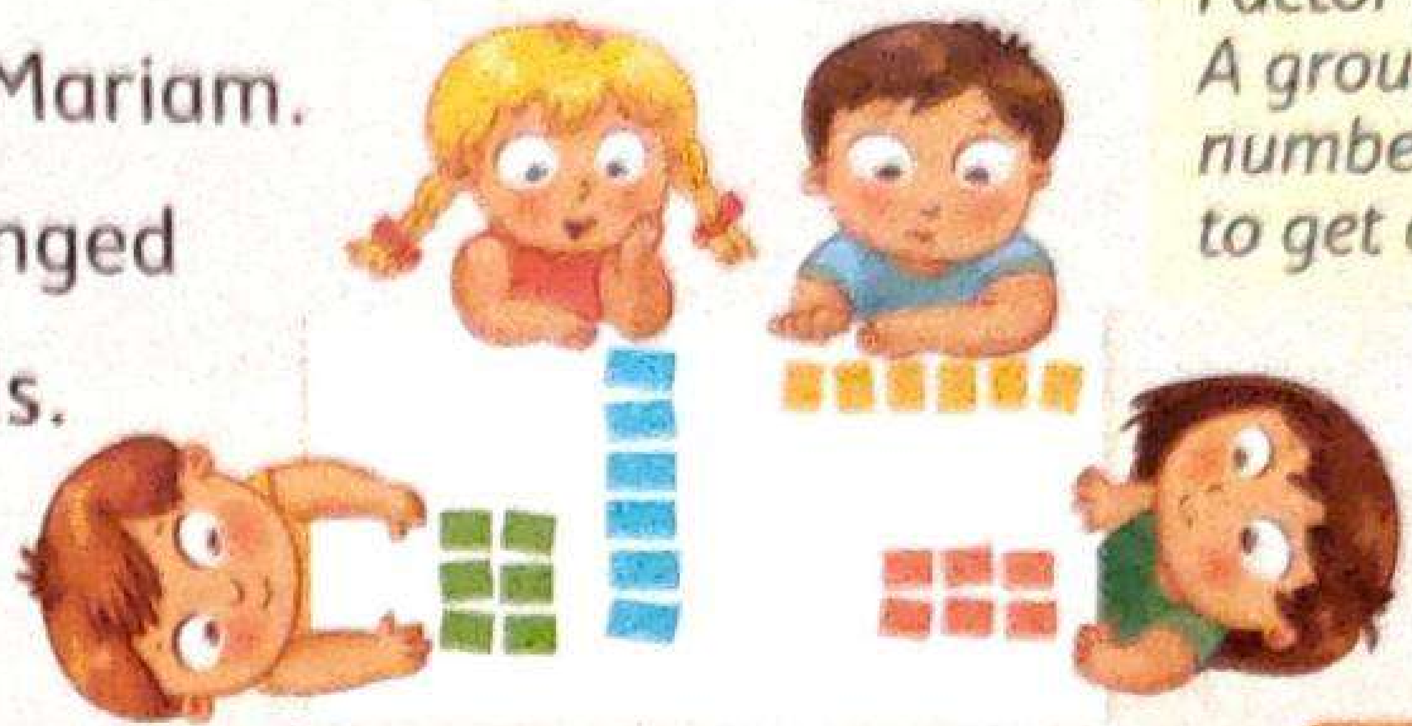
Lesson 25

# Factor pairs

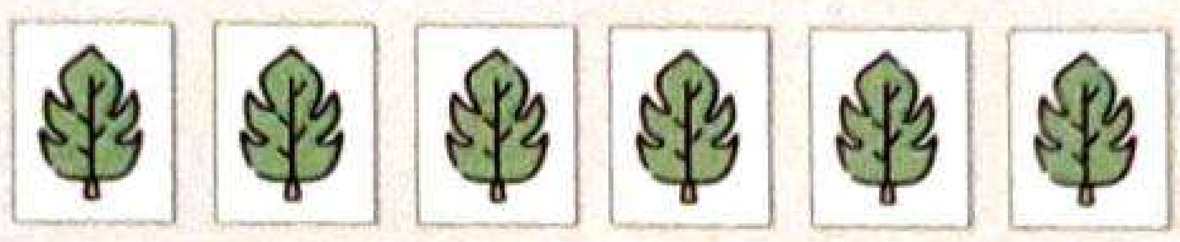
## Learn  Factor pair

> *Vocabulary*
>
> *Factor pair*
> *A group of two numbers we multiply to get a product.*

Four friends Bassem, Mina, Hanan and Mariam. Each one has 6 identical cards and arranged them in rows of equal number of cards.

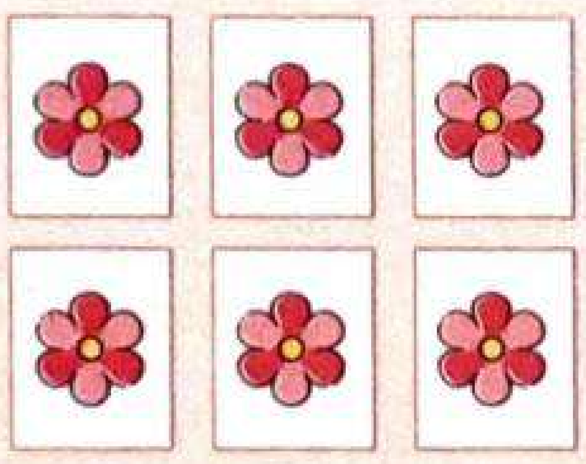


Bassem could arrange them in 1 row of 6 cards.



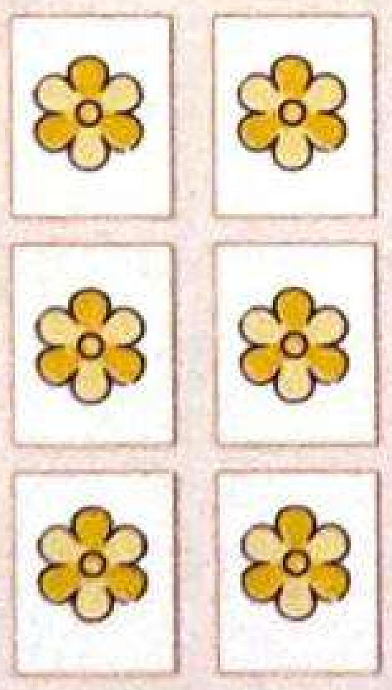
Factors
1 × 6
Factor pair

Mina could arrange them in 2 rows of 3 cards.



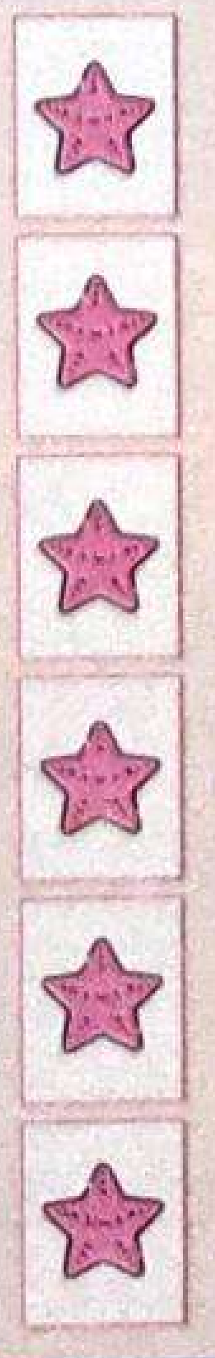
Factors
2 × 3
Factor pair

Hanan could arrange them in 3 rows of 2 cards.



Factors
3 × 2
Factor pair

Mariam could arrange them in 6 rows of 1 card.



Factors
6 × 1
Factor pair

**So,** *the number 6 can be arranged in different ways into arrays and its factors are 1, 2, 3 and 6.*

- *2 and 3 are factors of 6 (factor pair), and 6 is a common multiple of both 2 and 3.*
- *1 and 6 also are factors of 6 (factor pair), and 6 is a common multiple of both 1 and 6.*



## Check

Cut around the cards in the next page.

Use the cards to form different arrays of each number.

**Then write each factor pair and the factors of each number.**

**8**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |

Factors are ______________

**12**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |
| ___ × ___ | ___ × ___ |

Factors are ______________

**16**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |
| ___ × ___ | |

Factors are ______________

**20**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |
| ___ × ___ | ___ × ___ |

Factors are ______________

**18**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |
| ___ × ___ | ___ × ___ |

Factors are ______________

**14**

| ___ × ___ | ___ × ___ |
|---|---|
| ___ × ___ | ___ × ___ |

Factors are ______________

**Notes for parents**

- Help your child to cut out the cards.





## Practice

How many different arrays can you make with the given number ?
Color the grids to show your work.

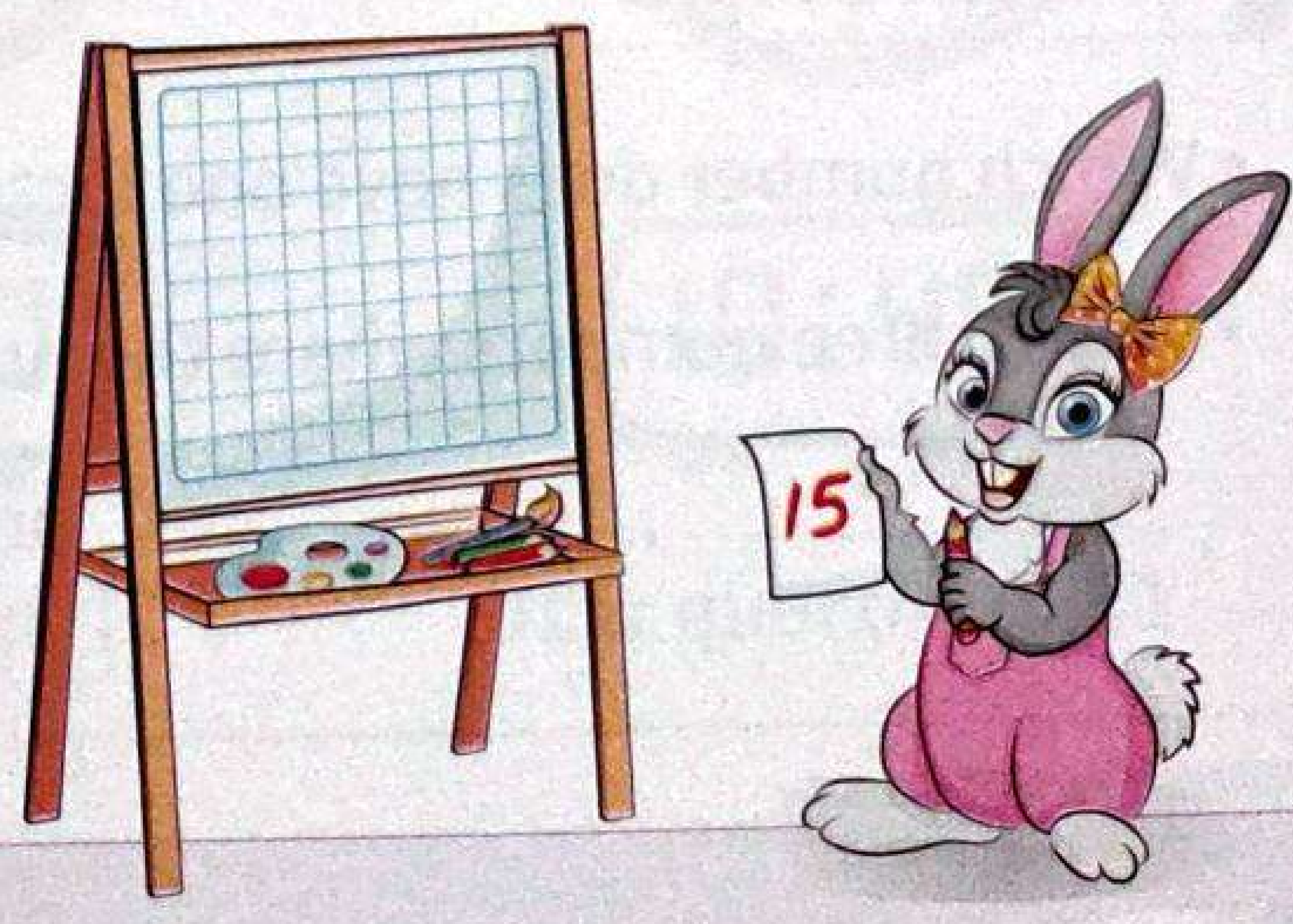
**10**

$2 \times 5$

**8**

**12**

**15**




• Reveiw commutative property which means you can multiply the factors in any order.

Complete using the given numbers. Use every number more than one time.

1 2 7 14

_____ x _____ = 14

_____ x _____ = 14

_____ x _____ = 14

_____ x _____ = 14

1 3 5 15

_____ x _____ = 15

_____ x _____ = 15

_____ x _____ = 15

_____ x _____ = 15

3 7 1 21

_____ x _____ = 21

_____ x _____ = 21

_____ x _____ = 21

_____ x _____ = 21

1 8 16 2

_____ x _____ = 16

_____ x _____ = 16

_____ x _____ = 16

_____ x _____ = 16

## Challenge

- Which number does have one factor pair ? _____
- Write three numbers where the number of the factors of each is two.

_____ , _____ and _____

**Notes for parents**

- Help your child to explore the relationship between multiples and factors.

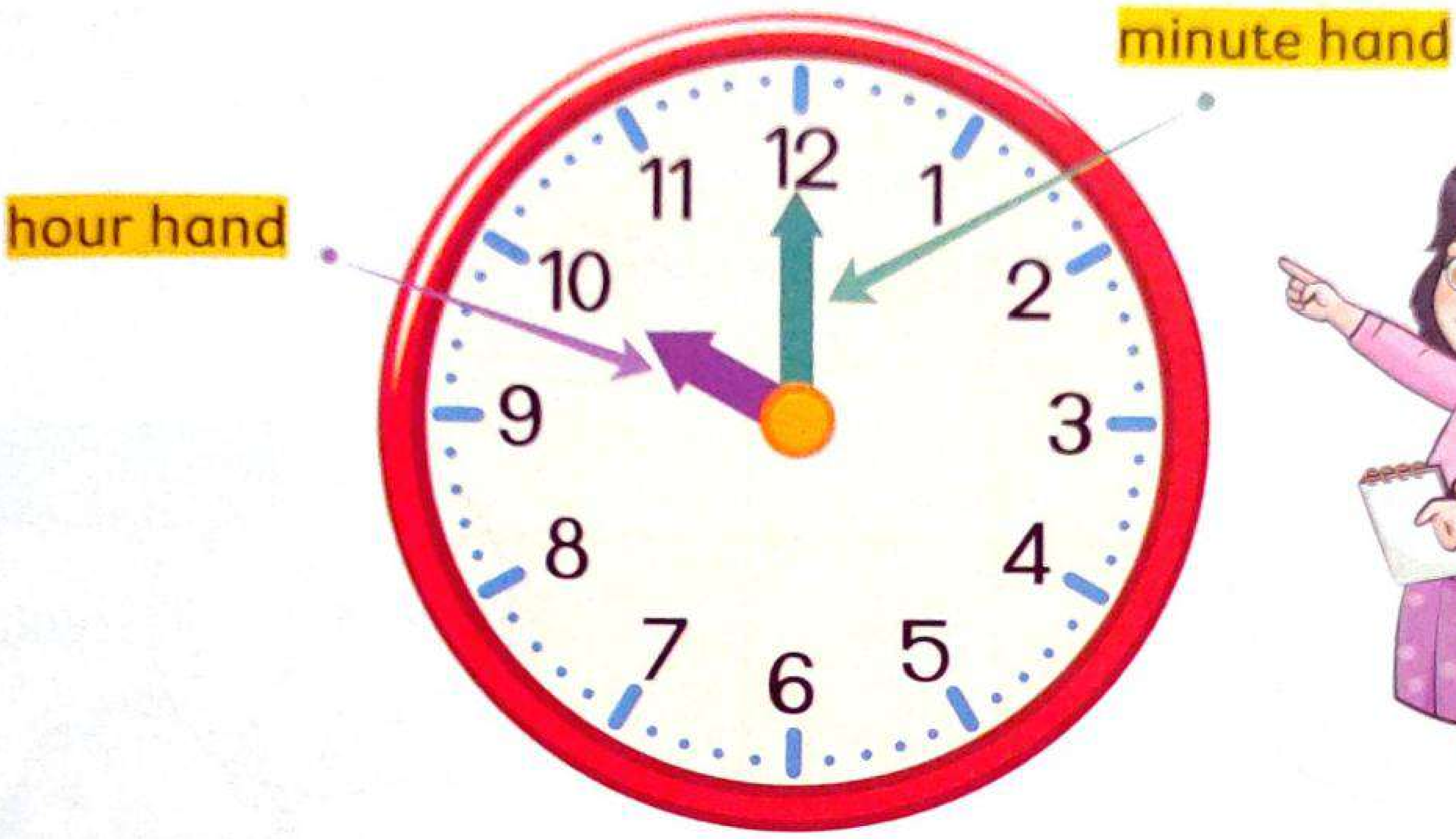
Place a smiley face

# 26 & 27 Time to 5 minutes

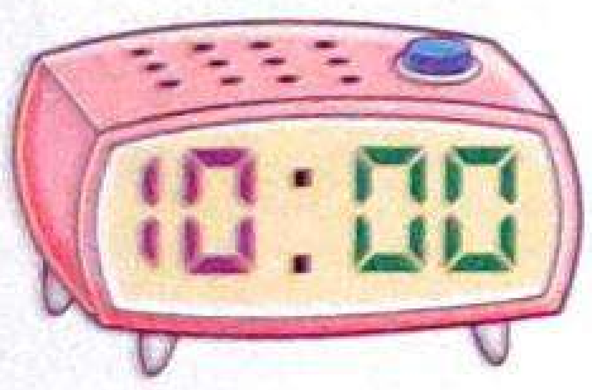
## Pre-study




There are 60 minutes in 1 hour.






Digital clock



Analog clock




It is quarter past 10




It is half past 10




It is quarter to 11

• Ask your child where the minute hand and the hour hand point at 4 : 30 , 2 : 15 and 5 : 45

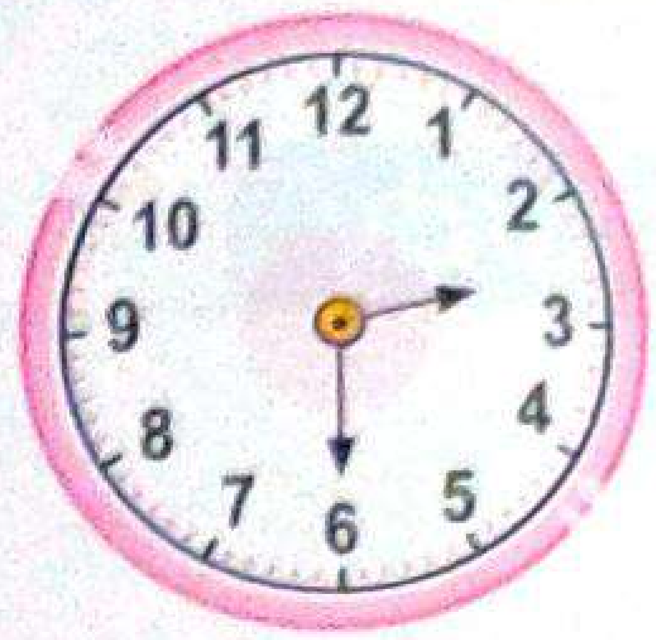
## Practice

Write the time in two ways.



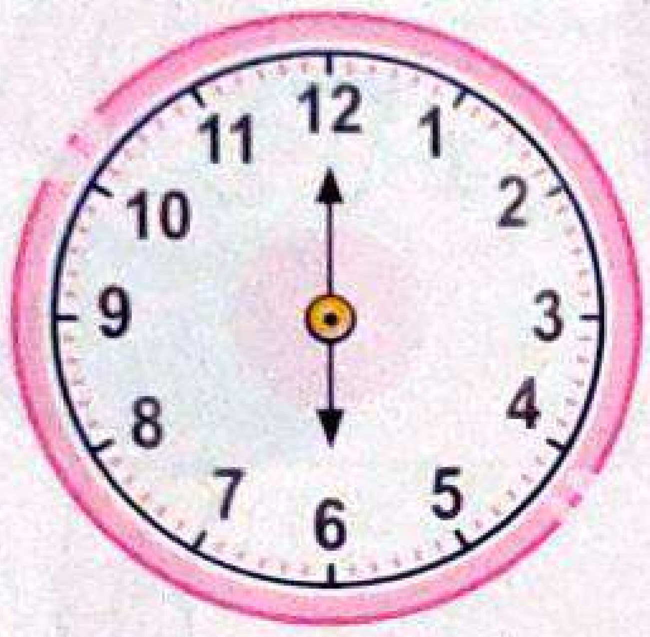
___ : ___

It's ________



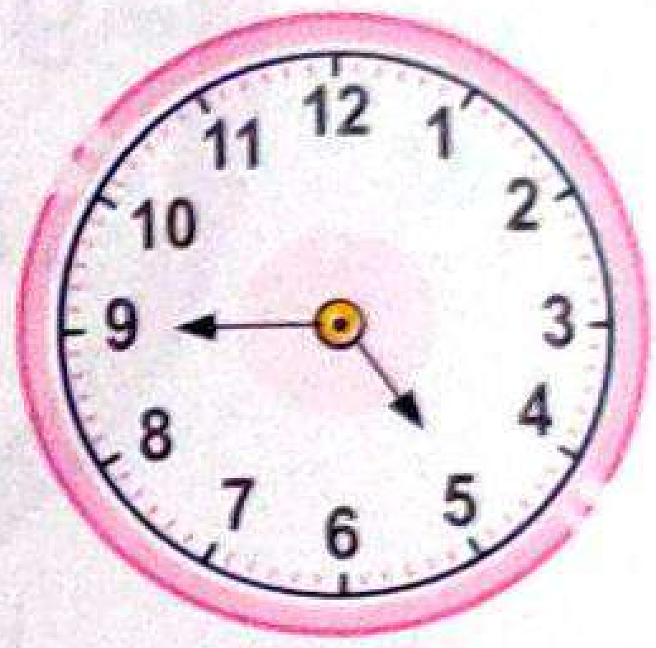
___ : ___

It's ________



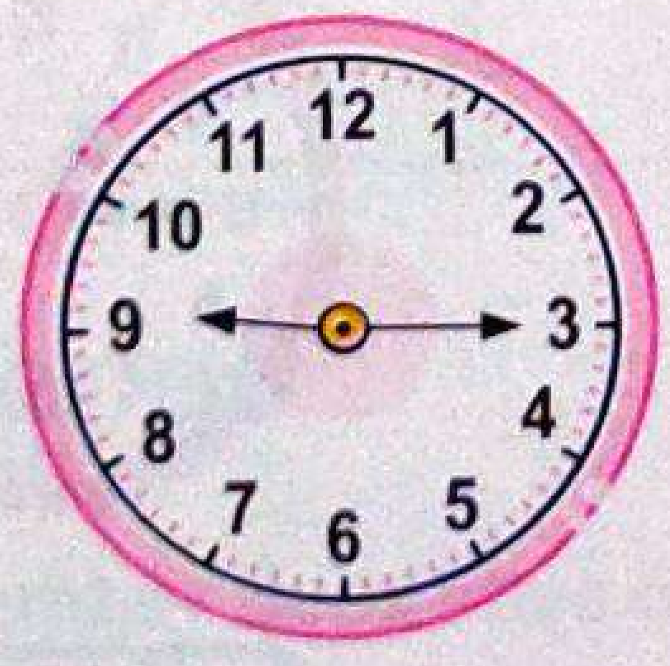
___ : ___

It's ________



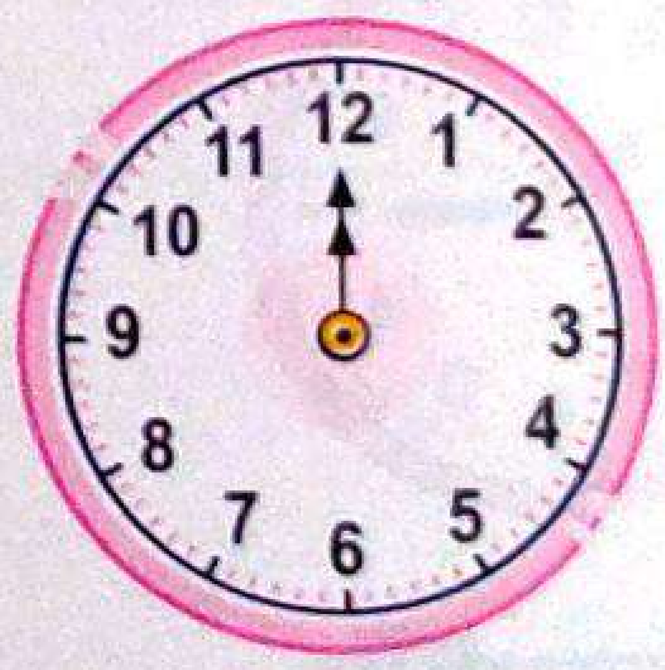
___ : ___

It's ________



___ : ___

It's ________



___ : ___

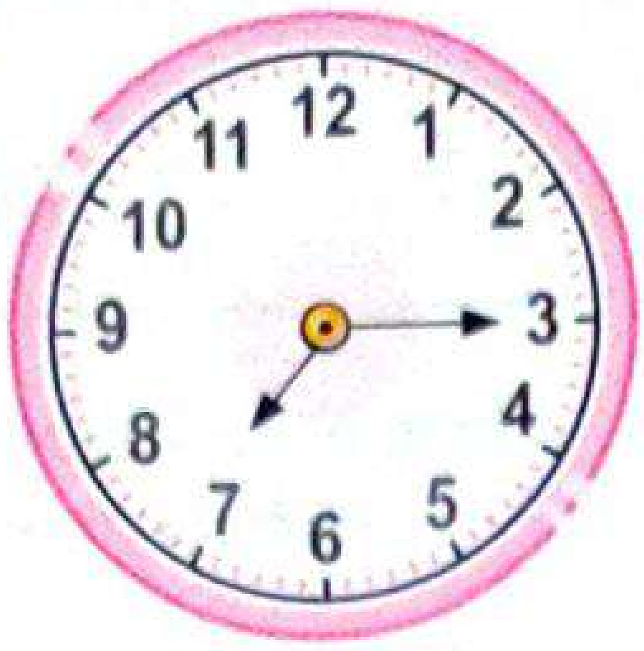
It's ________

**Notes for parents**

- Ask your child to tell you the time for each 15- minute interval from 2 : 00 to 3 : 00

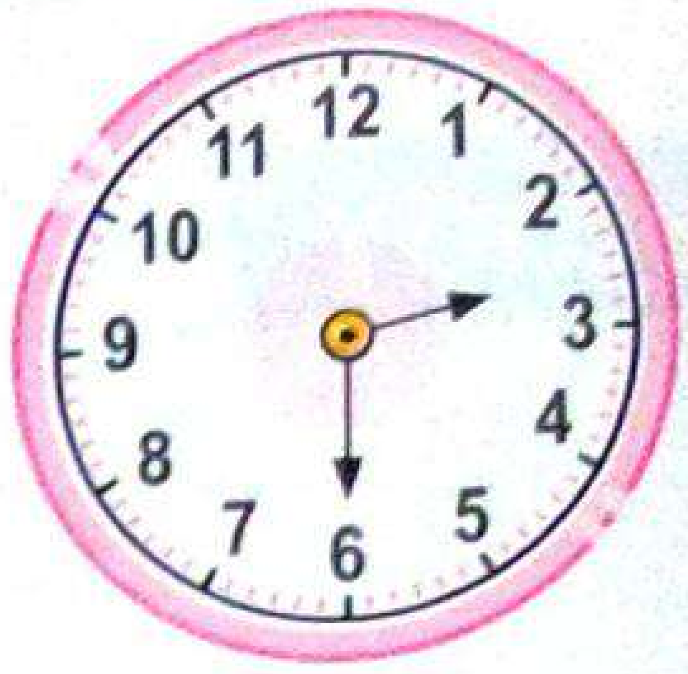
## Practice

Write the time in two ways.



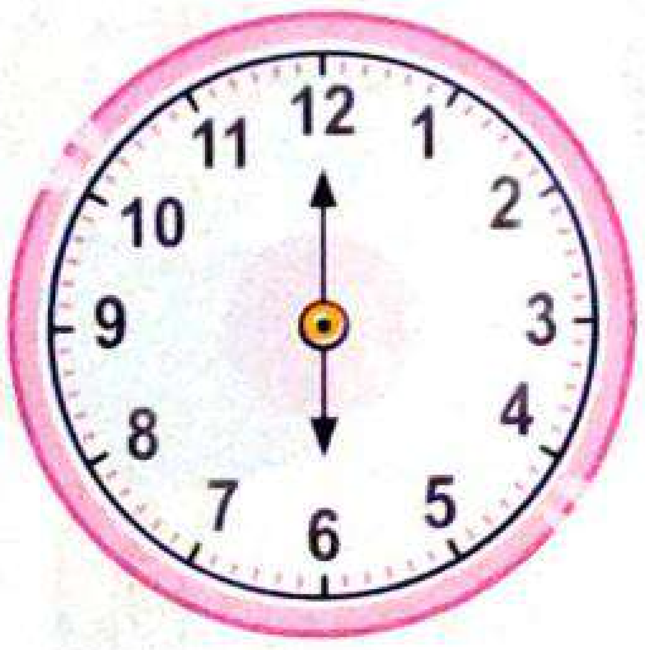
___ : ___

It's ________



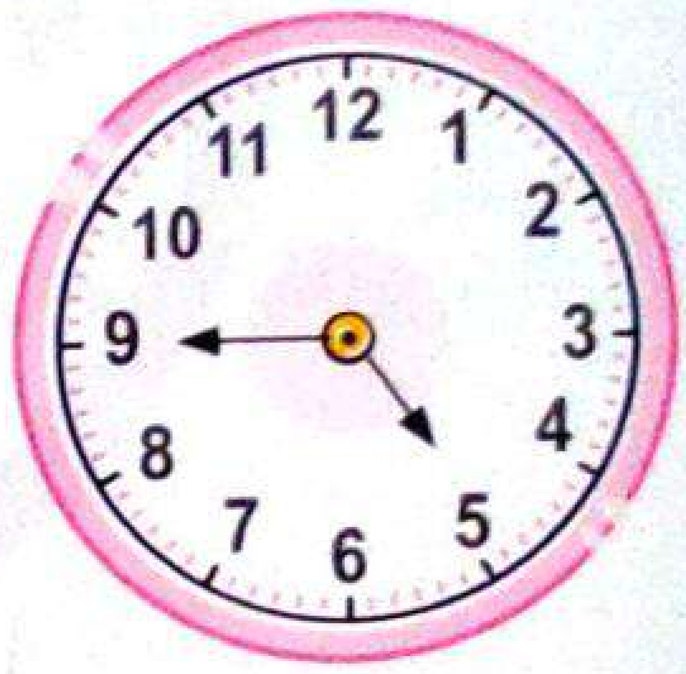
___ : ___

It's ________



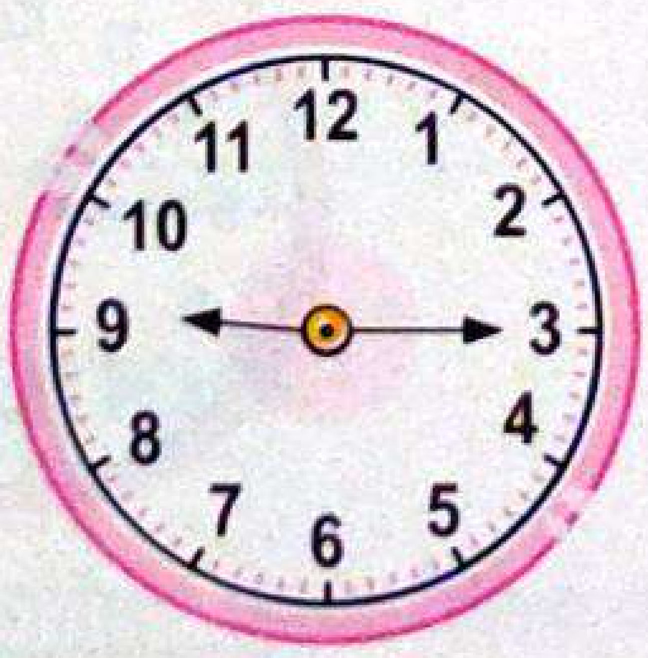
___ : ___

It's ________



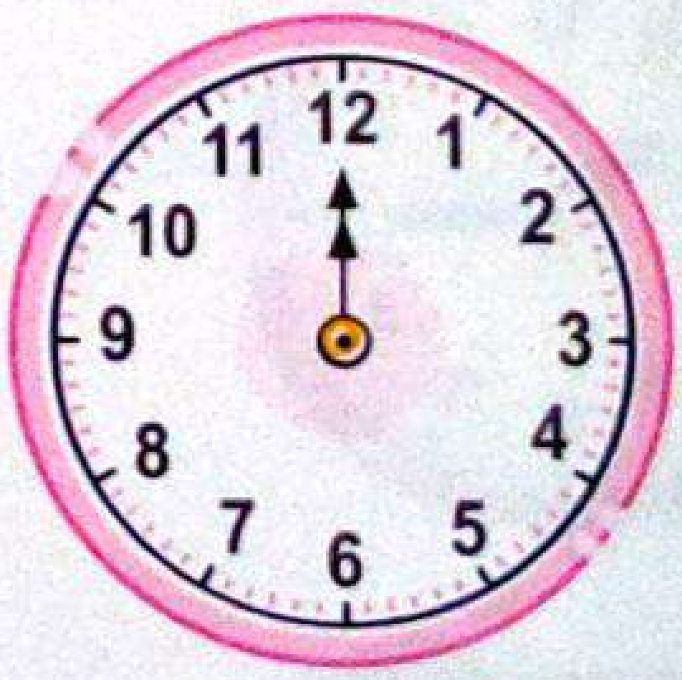
___ : ___

It's ________



___ : ___

It's ________



___ : ___

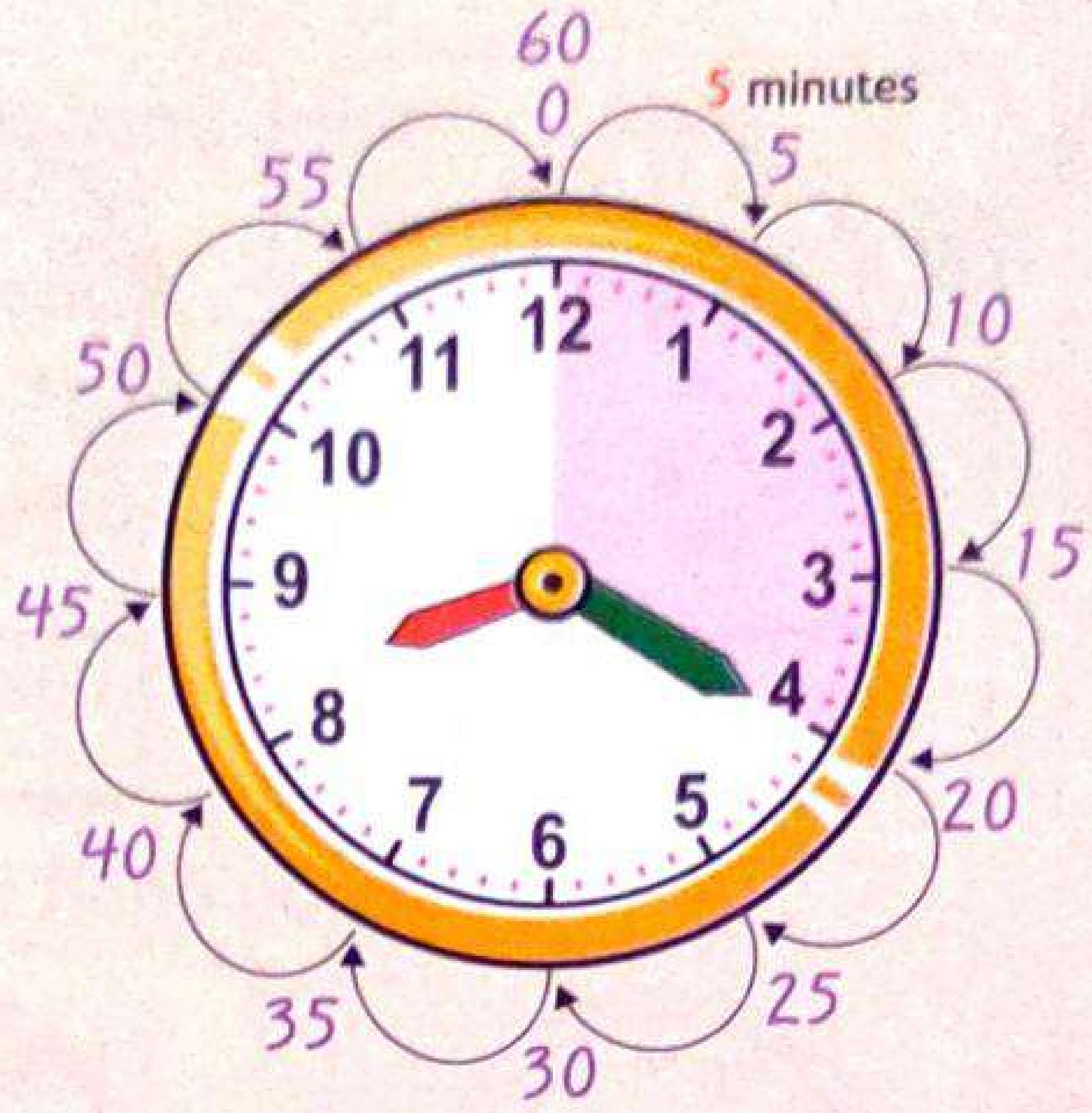
It's ________

**Notes for parents**

- Ask your child to tell you the time for each 15- minute interval from 2 : 00 to 3 : 00

## Learn Time to 5 minutes

It takes 5 minutes for the minute hand to move from one number to the next number on a clock face.




*Math tip*

*Skip count by fives 5, 10, 15, 20 (multiples of 5). You count 4 times.*

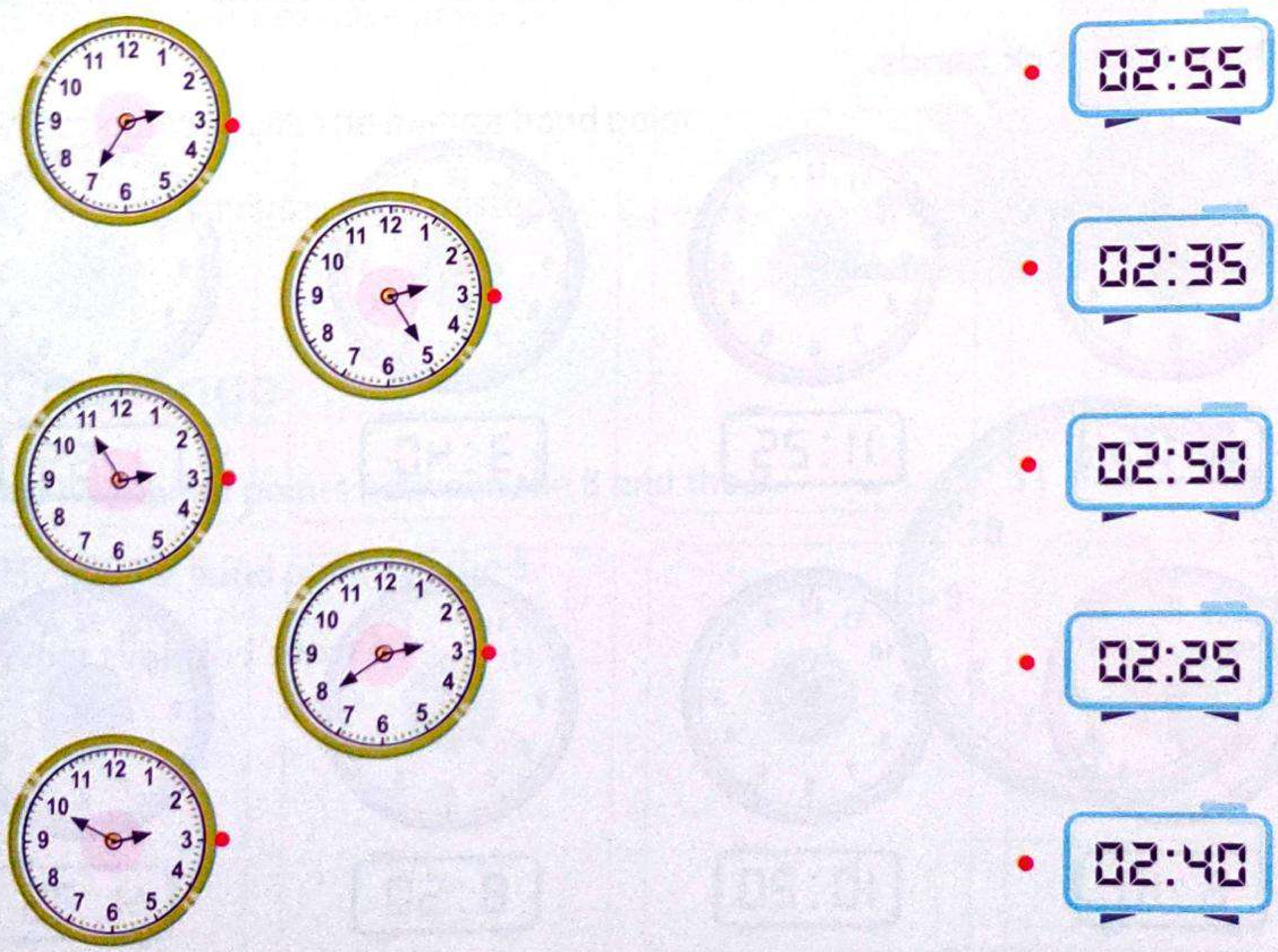


The time is 8 : 20

**Where does the minute hand point at 8 : 20 ?** The minute hand points at the 4

## Practice

**Join.**

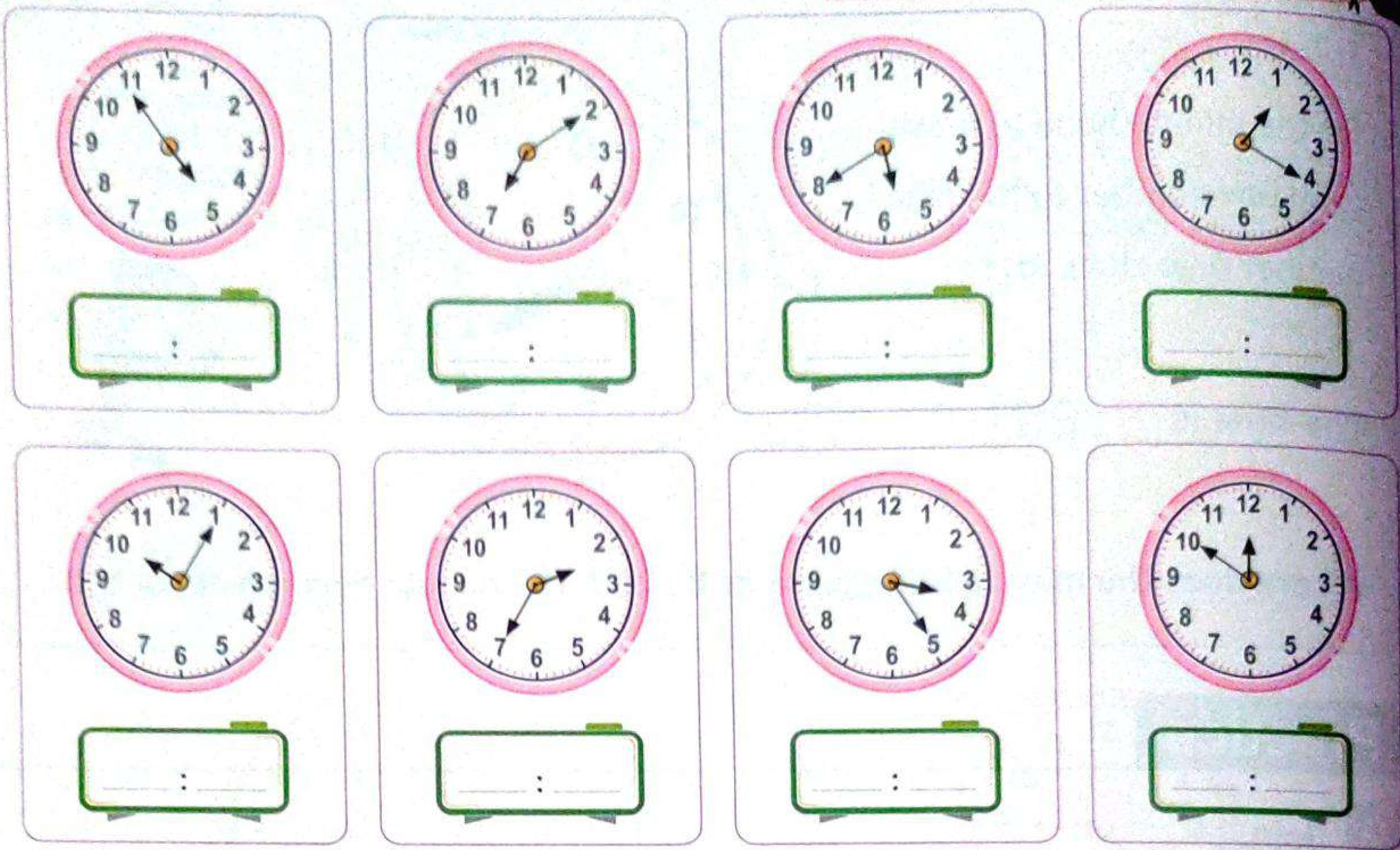



• Ask your child to count from 8 : 00 to 9 : 00 using 5-minutes intervals (8 : 00 , 8 : 05, 8 : 10, 8 : 15, and so on)

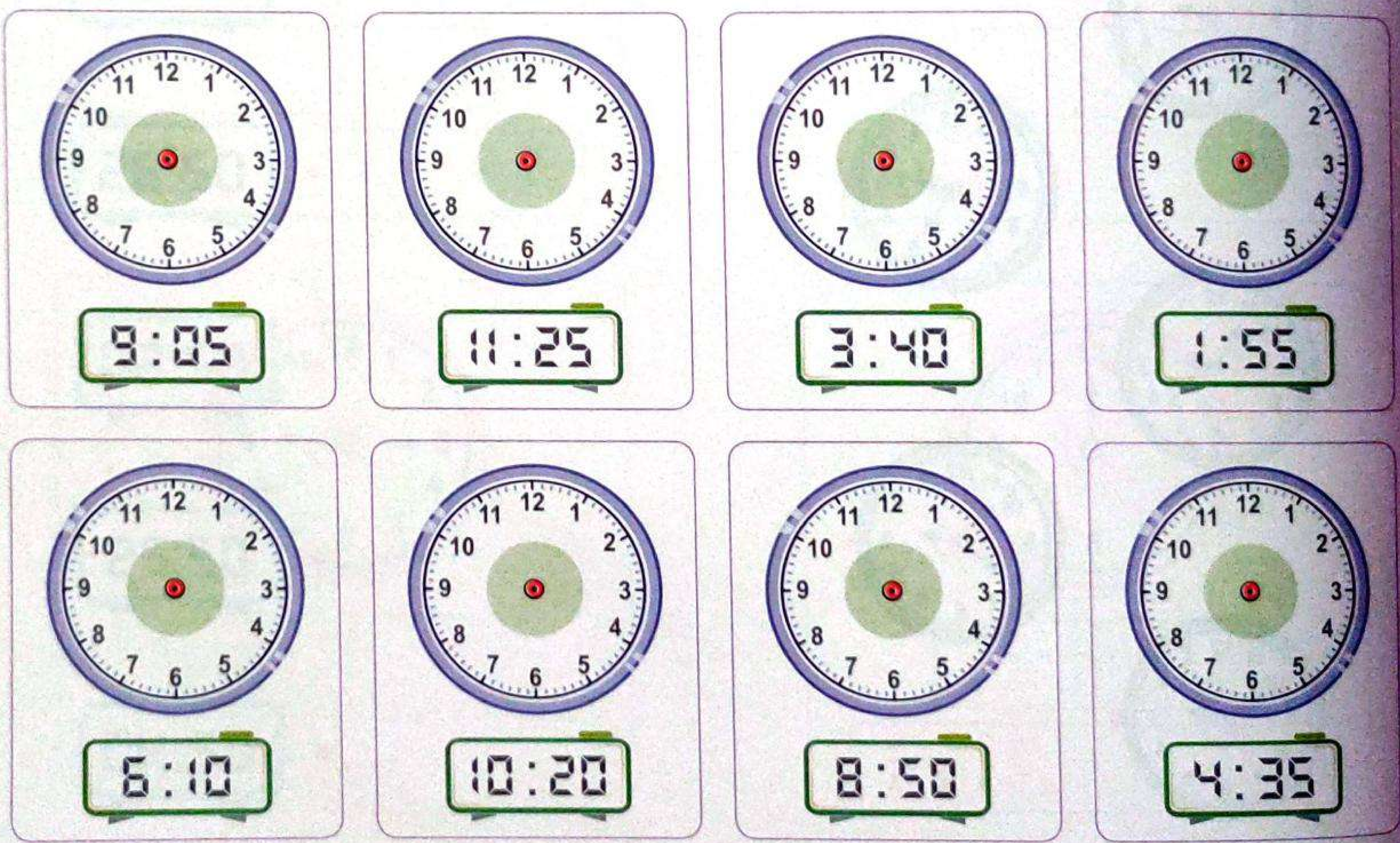
**Did you know**

Koalas sleep around 18 hours a day.

## Write the time.



## Draw the clock hands.




**Notes for parents**

- Ask your child to tell the time in different ways.

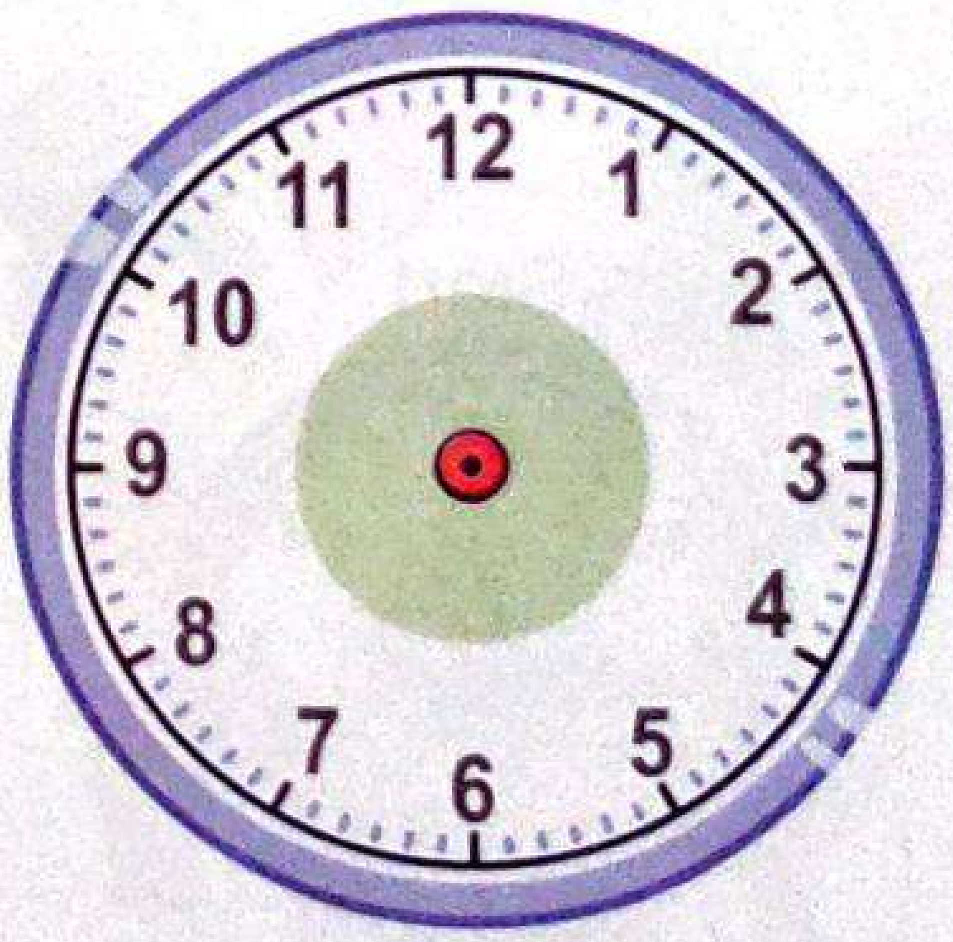
Answer. The first one is done for you.



- What number will the minute hand point to when 35 minutes have passed ? 7
- What number will the minute hand point to when 10 minutes have passed ? ________
- What number will the minute hand point to when 25 minutes have passed ? ________
- What number will the minute hand point to when 40 minutes have passed ? ________
- What number will the minute hand point to when 5 minutes have passed ? ________
- What number will the minute hand point to when 60 minutes have passed ? ________

## Challenge

- My hour hand points between the 8 and the 9.
  My minute hand points to the 5.
  What time do I show ?




____ : ____

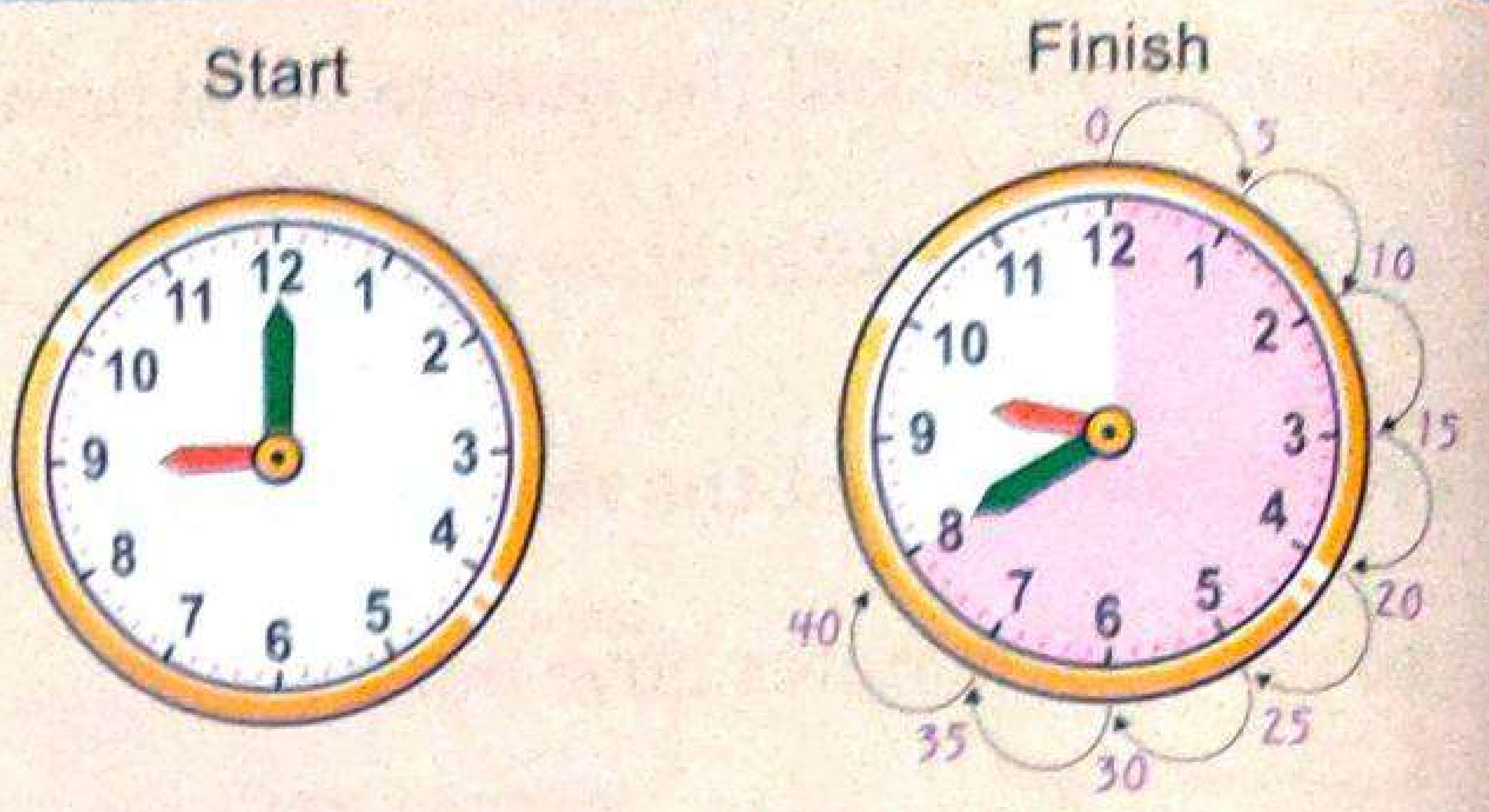
• Let your child count by 5 to answer the questions each time he/she write how many time he/she counted.

## Learn Elapsed time

Rasha started reading at 9:00

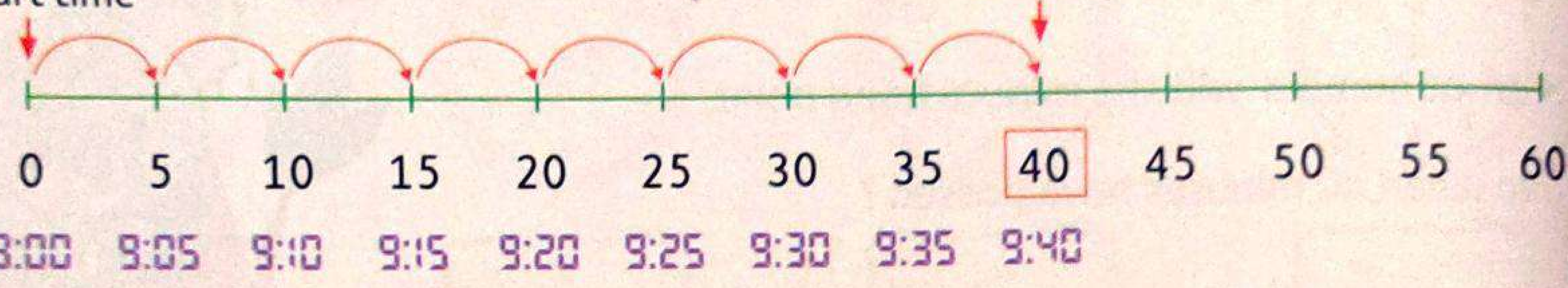
She finished reading at 9:40

For how long did she read ?




She read for 40 minutes.

You can count by fives as follows :



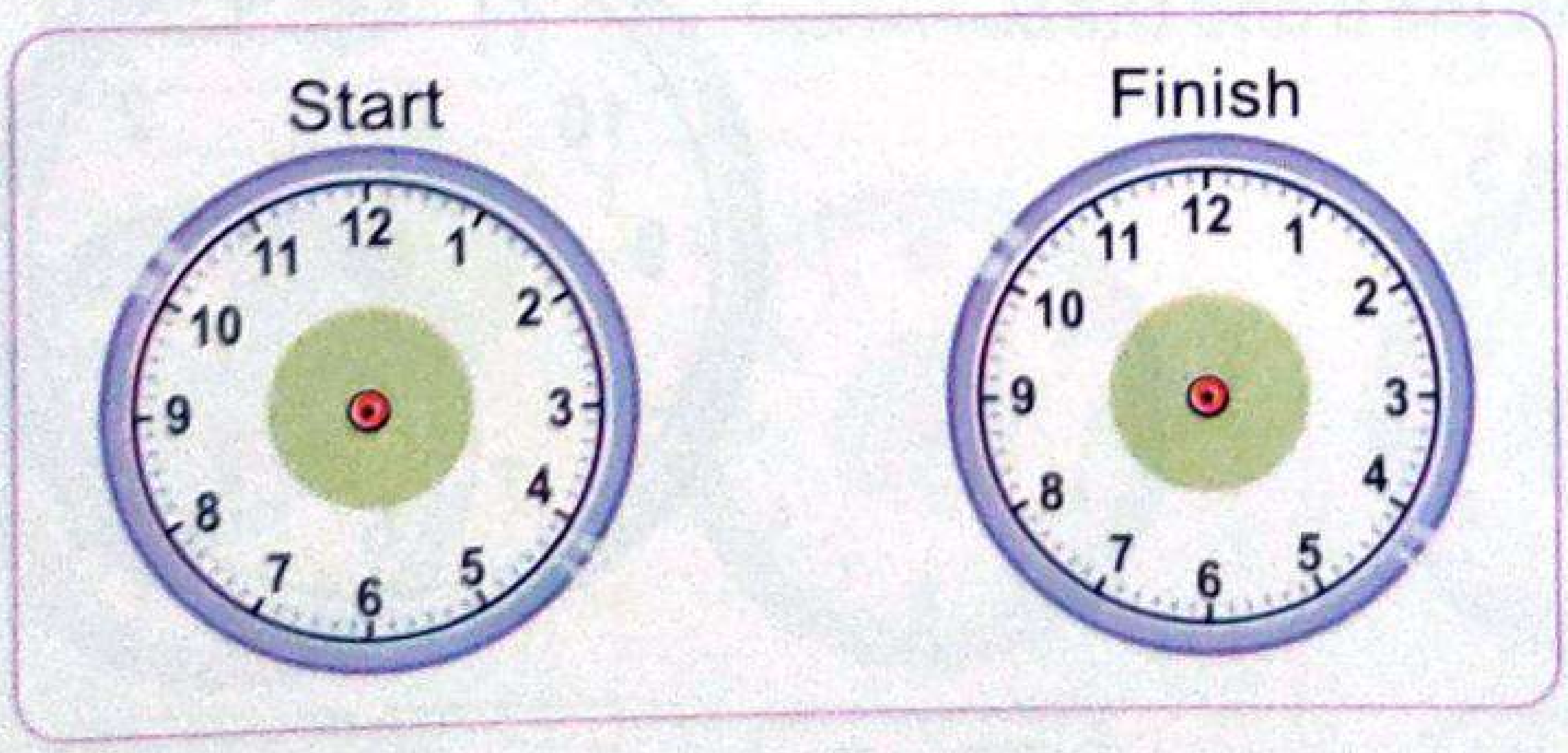

The elapsed time from 9:00 to 9:40 is 40 minutes.

## Check

Youssef started swimming at 5 : 00 and he finished at 5 : 25

**For how long did he swim ?**






*Math tip*

*Count by fives.*

He swam for ________ minutes.

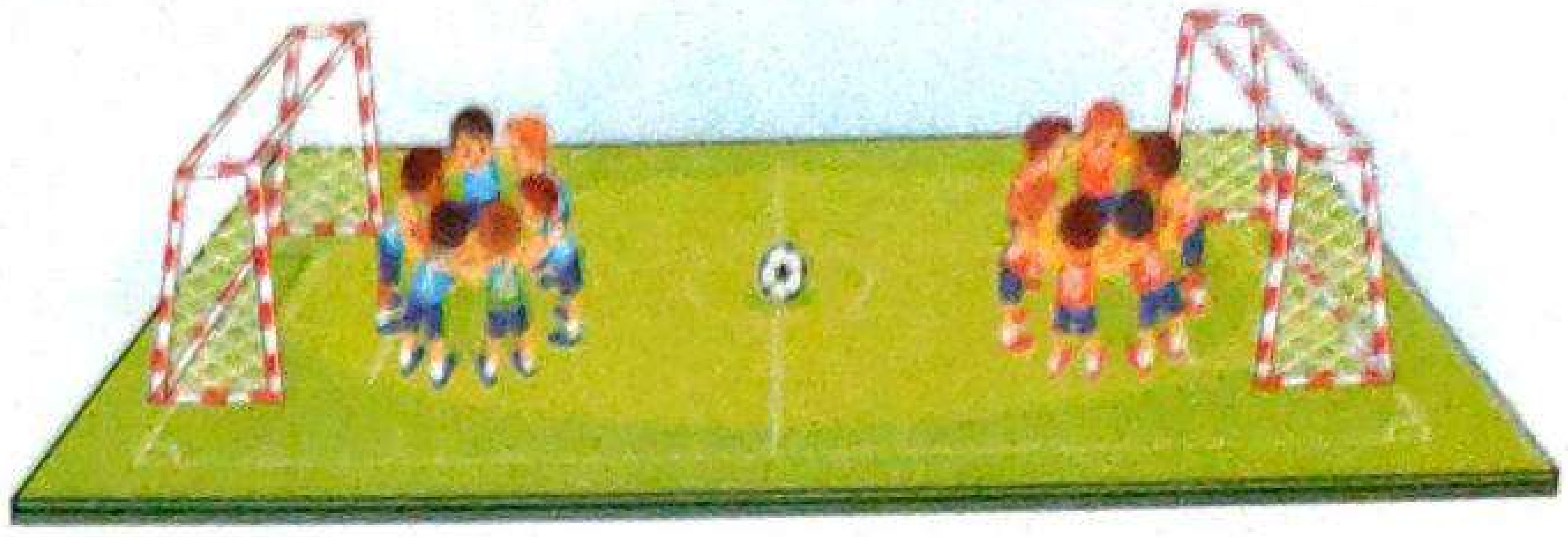
Notes for parents

- Point out the clock when it shows time to the hour. Ask your child to explain how a clock shows that an hour has gone by.

## Practice

**Answer the following.**

**1** A football match started at 



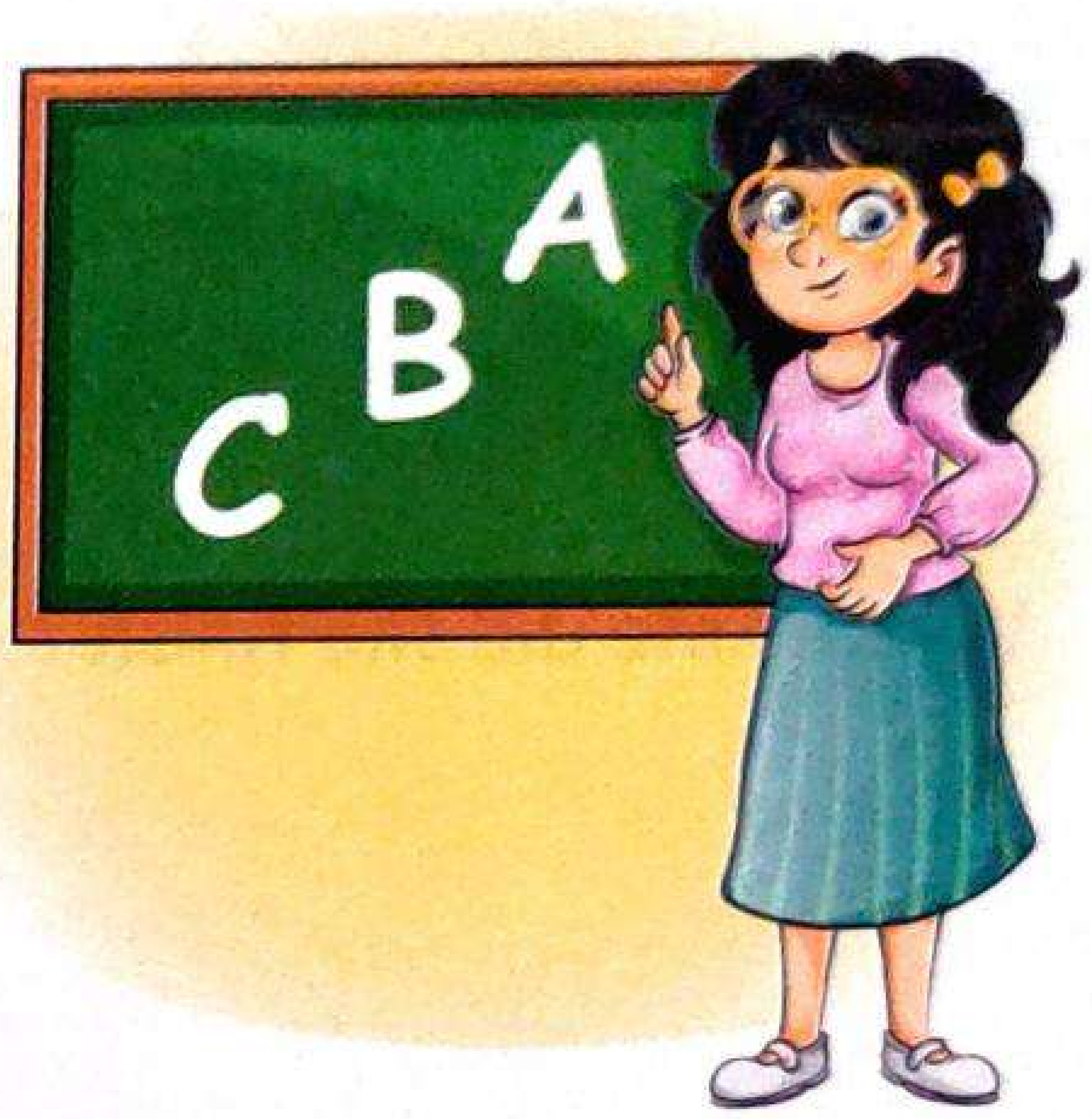
The first round ended at 

**For how long did the first round take ?**

The first round took ____________ minutes.

---

**2** Our English lesson started at 




It finished at 

**For how long did English lesson take ?**

English lesson took ____________ minutes.

---

**3** Habiba went to a party at 8:00



The party finished at 

**What is the time period of the party ?**

The time period of the party ____________ minutes.

**4** John wakes up at 7 O'clock

He gets ready at 



**How many minutes does he take to get ready ?**

He takes .................... minutes.

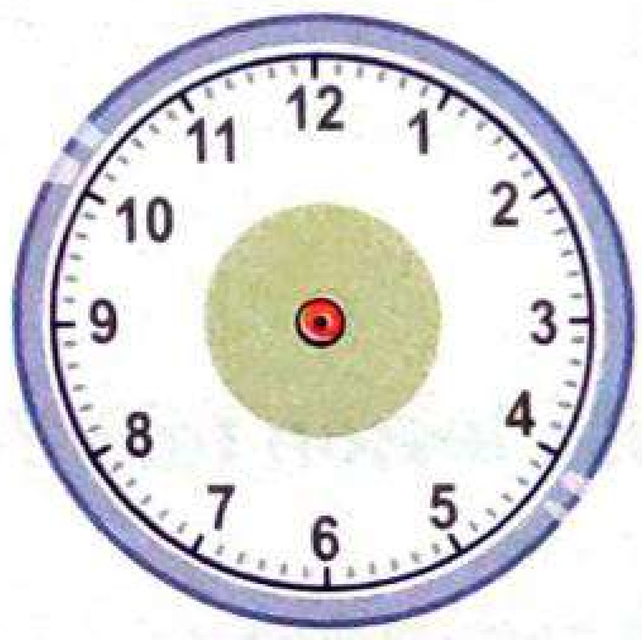
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**Draw the hands on the clock to show the time in each of the following.**

**1** Yara started playing tennis at 6:00

She played for 35 minutes.

**What time did she finish ?**





---

**2** Hassan left home at 7:00

It takes him 20 minutes to get to school.

**What time did he get to school ?**





**Notes for parents**

- Ask your child what the time will be 3 hours after 8 : 15.

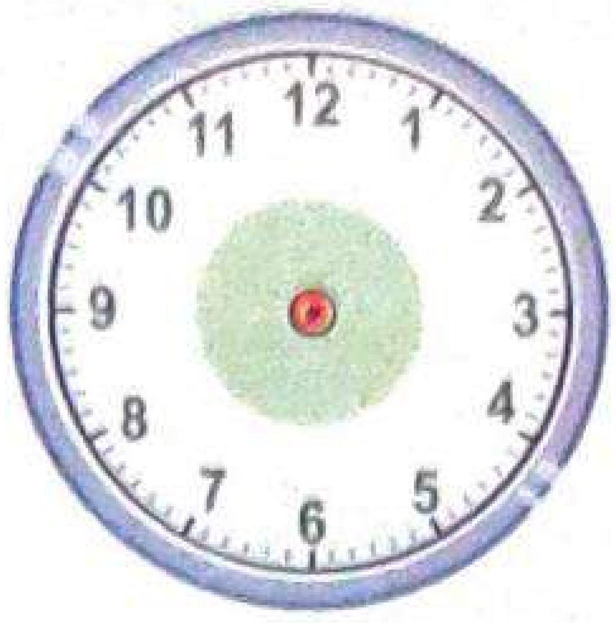


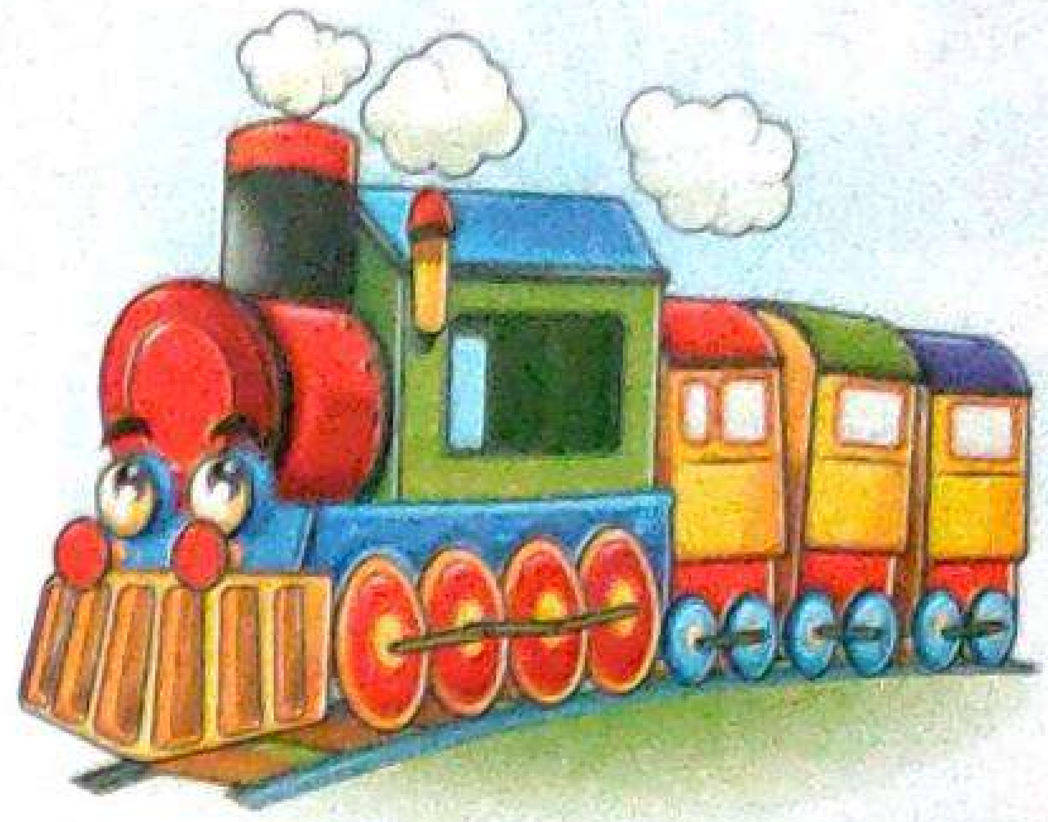
Scanned by TapScanner

**3** The train to Alexandria arrived at 9:00

It left the station 55 minutes earlier to get to Alexandria.

**What time does the train leave the station ?**

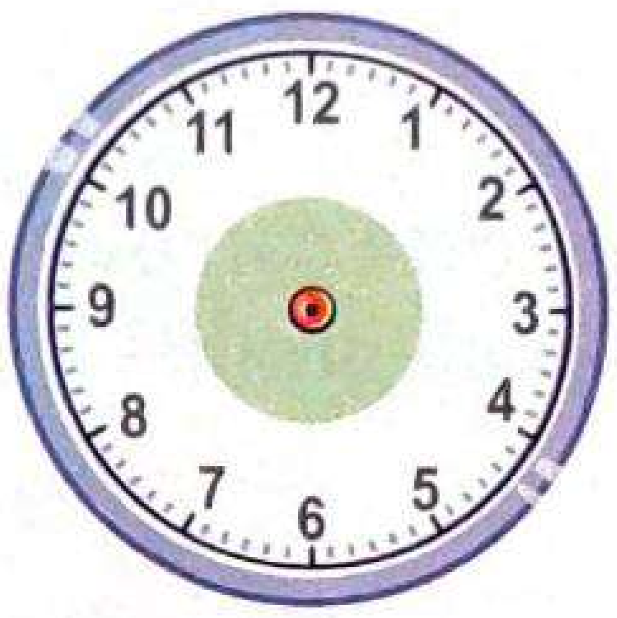




**4** A T. V show ended at 8:00

It lasted for half hour.

**What time did the T.V show start ?**





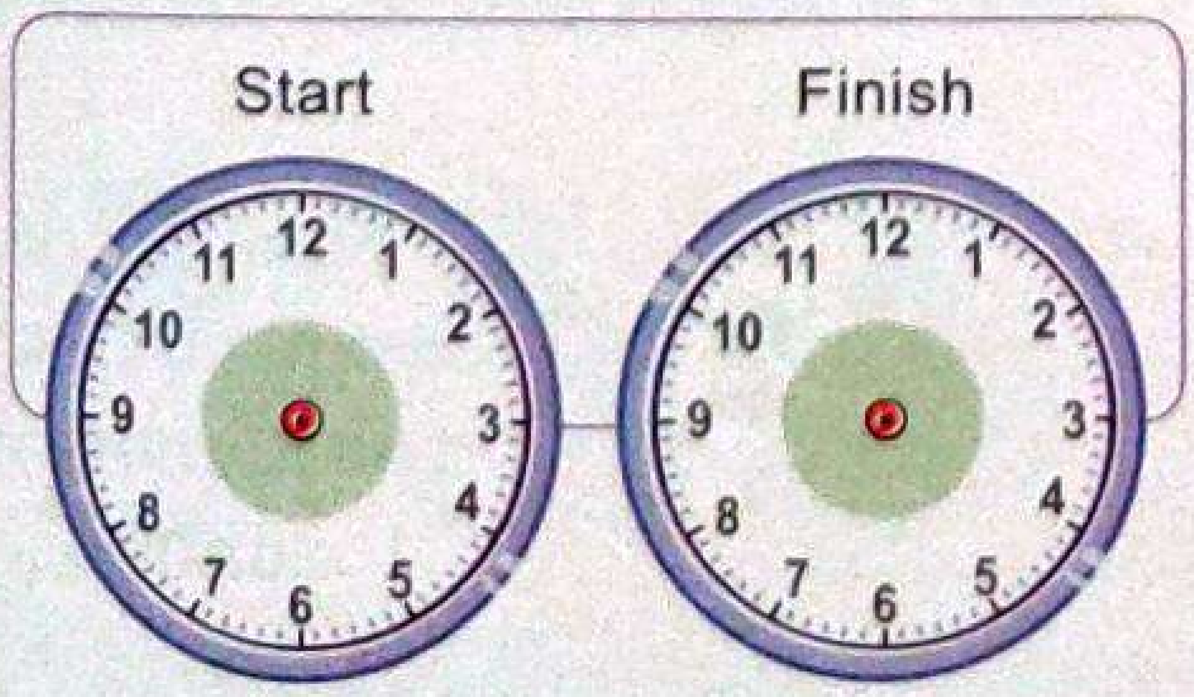
## Challenge

- Salma's piano lesson begins at 4:15

It lasts for 30 minutes.

**At what time does her lesson end ?**

____ : ____






- Ask your child how many hours and minutes pass from the time he/she leaves for school until he/she returns home.

Place a smiley face

# Lessons 28 & 29 Division

## Learn Division

*Vocabulary*

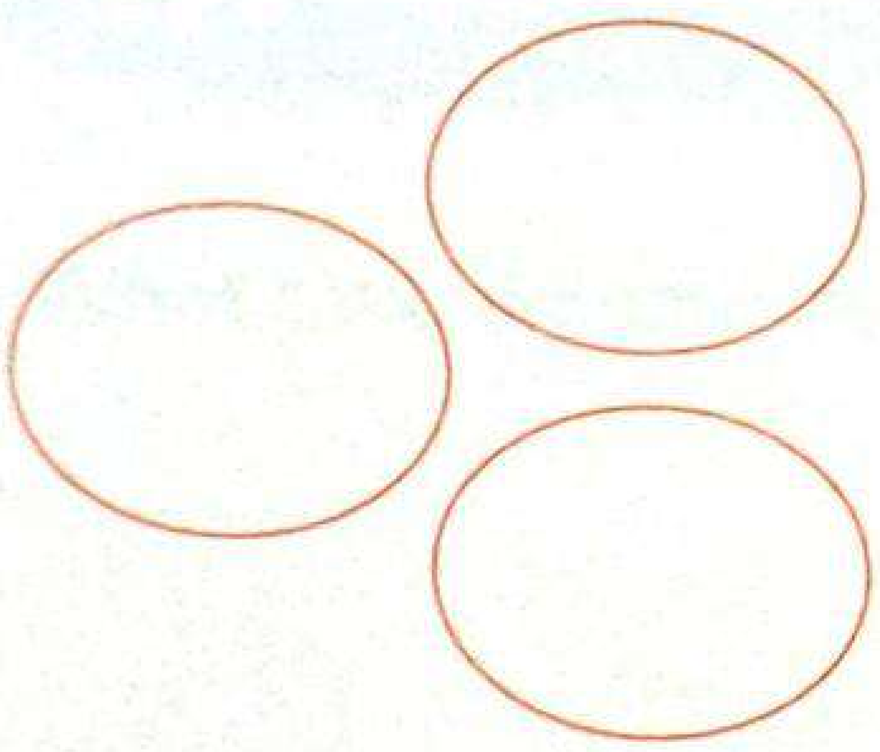
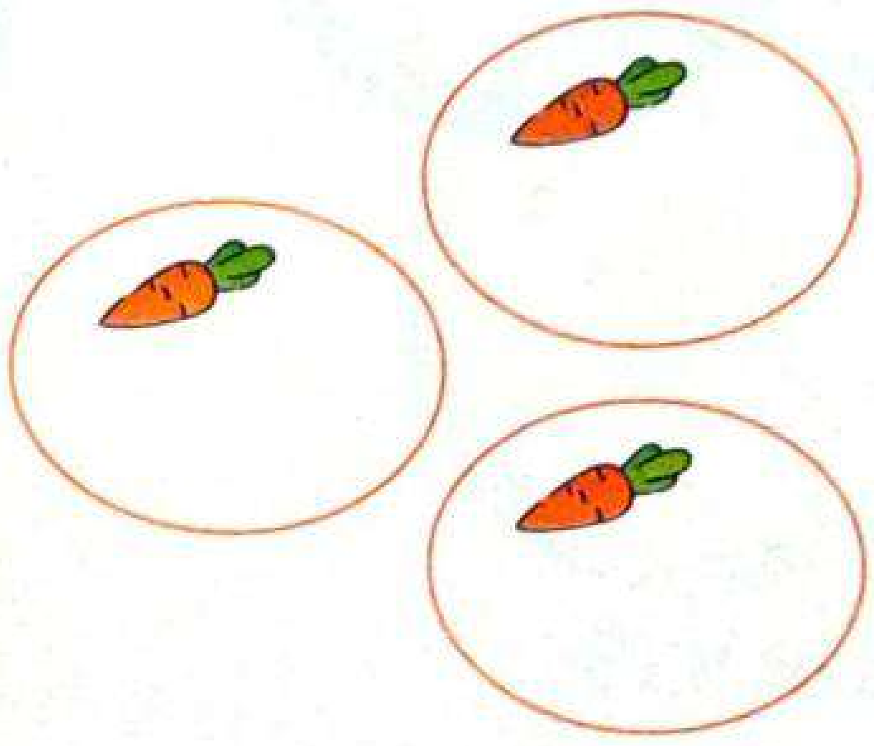
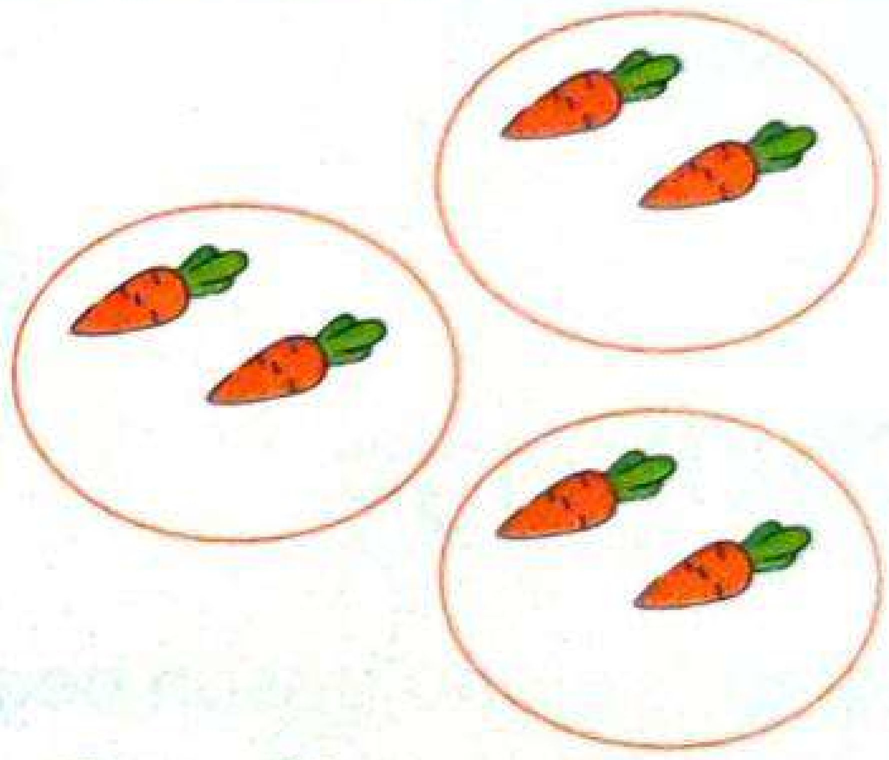
*Divide*
*Separate some things in equal groups.*



To share things equally, you can divide.

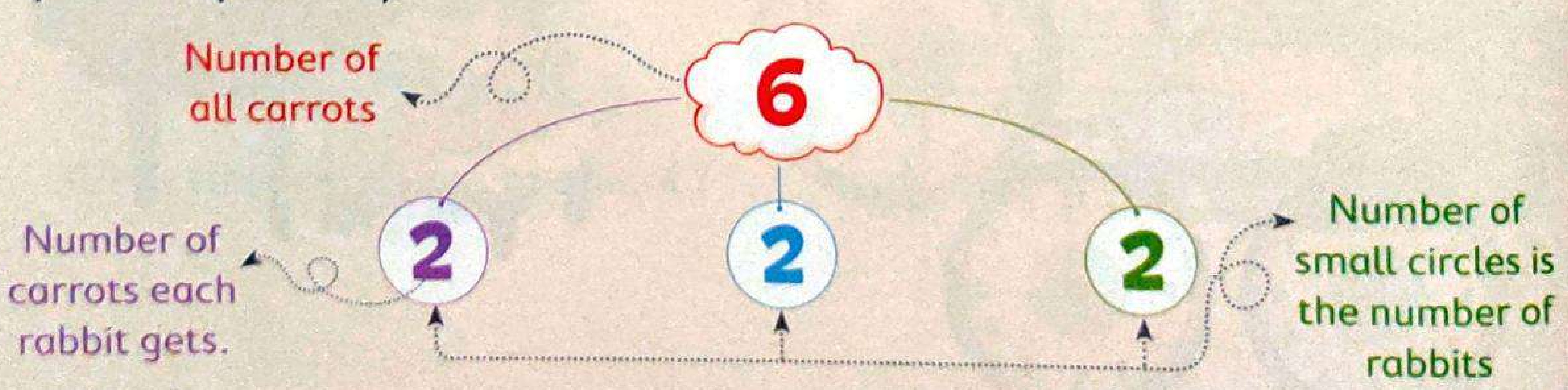
- Hend has **6** carrots to feed the rabbits.
- There are **3** rabbits.
- How many carrots does each rabbit get ?



| Make **3** groups. | Draw **one** carrot in each group | Draw **another** carrot in each group. |
|---|---|---|
|  |  |  2 in each group. |

**So,** each rabbit gets **2** carrots.

- The following model is called a **part - part - whole** to represent the sharing problem (Division).




**Notes for parents**

- Ask your child to use 8 objects to make equal groups.

## Check

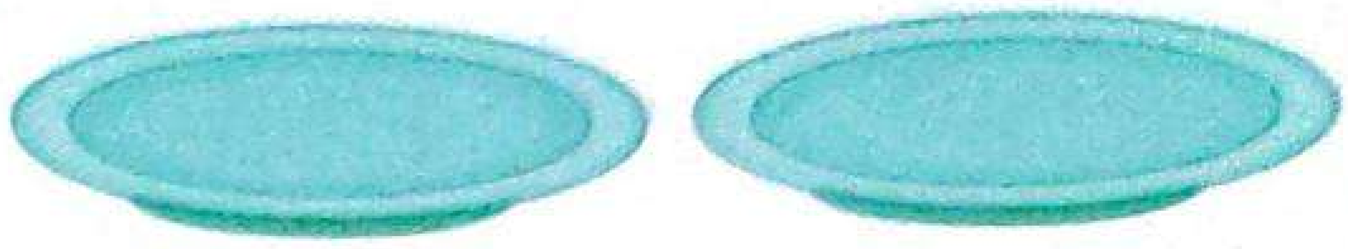
Draw to show equal groups. Complete.

• 9 coins divided among 3 money boxes.



Each money box has ________ coins.

• 8 eggs divided among 2 plates.

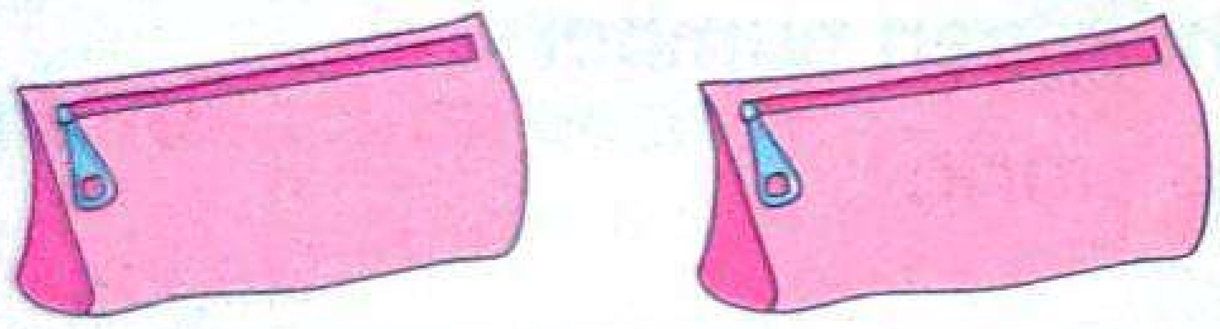


Each plate has ________ eggs.

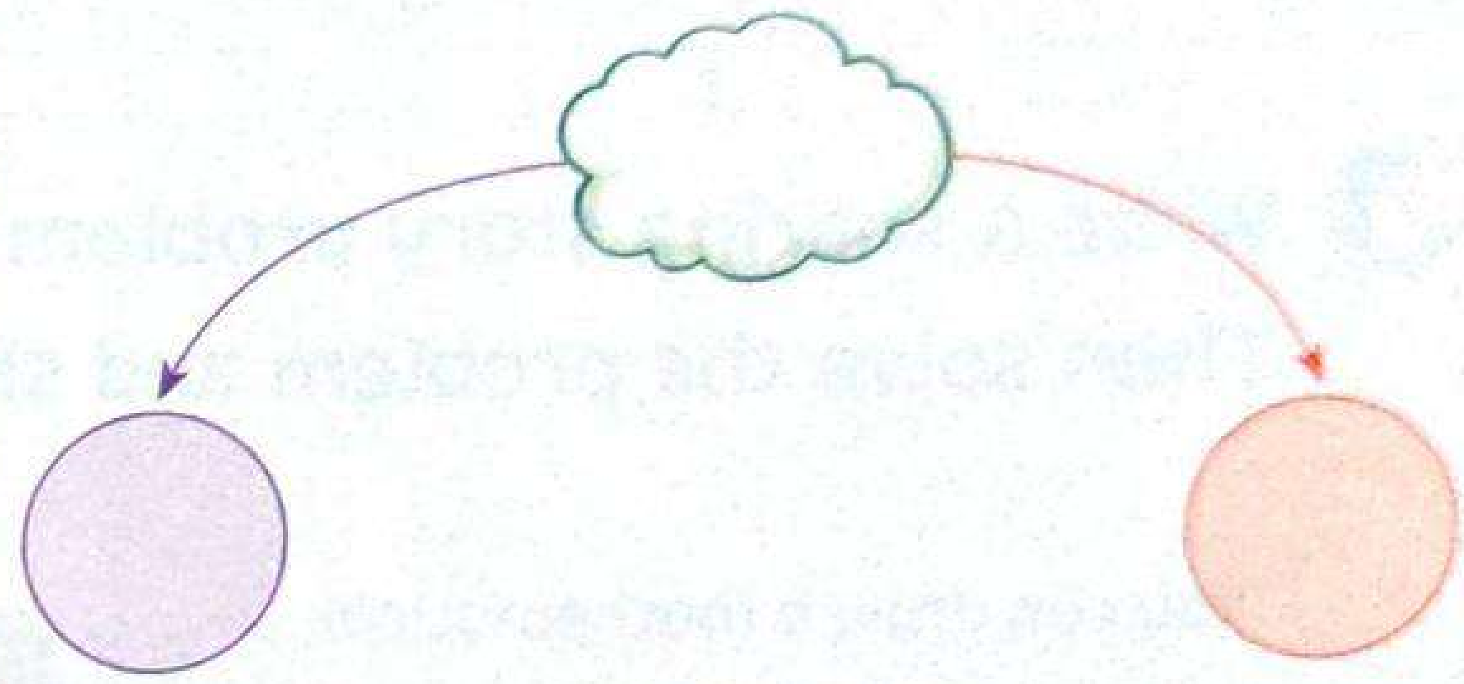
## Practice

Draw to show equal groups. Fill in the part - part - whole model. Complete.

• 6 pencils divided among 2 pencil cases.



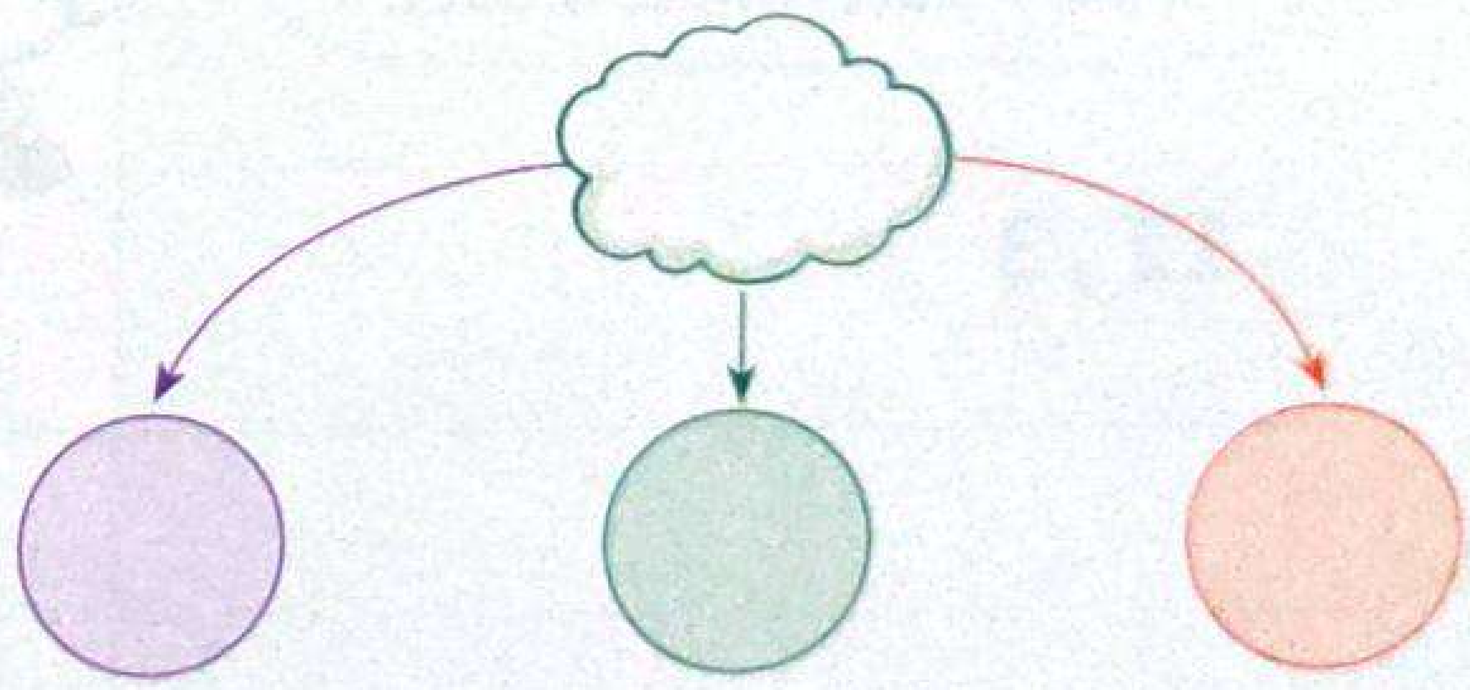
Each pencil case has ________ pencils.



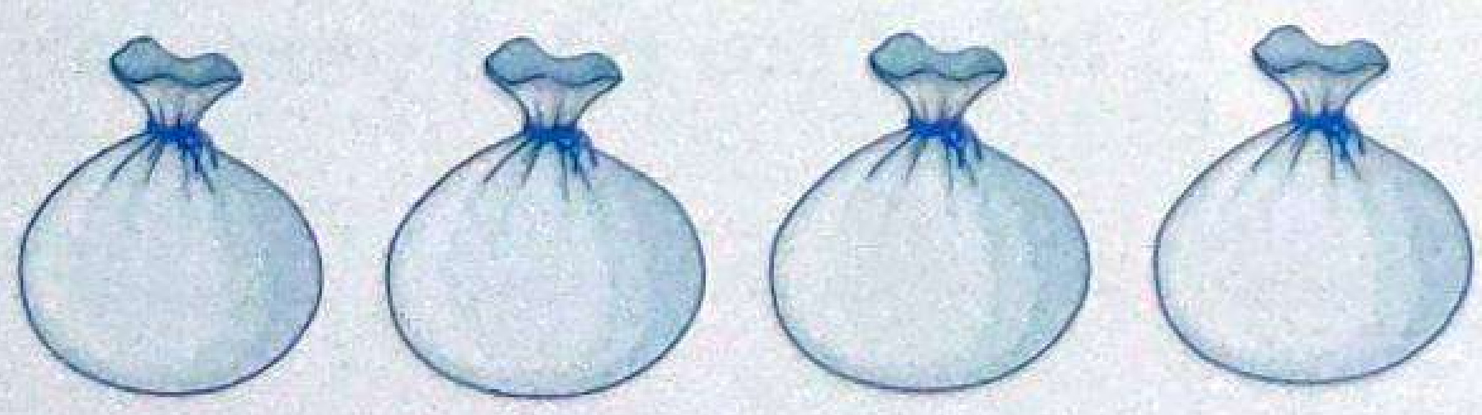
• 12 oranges divided among 3 plates.



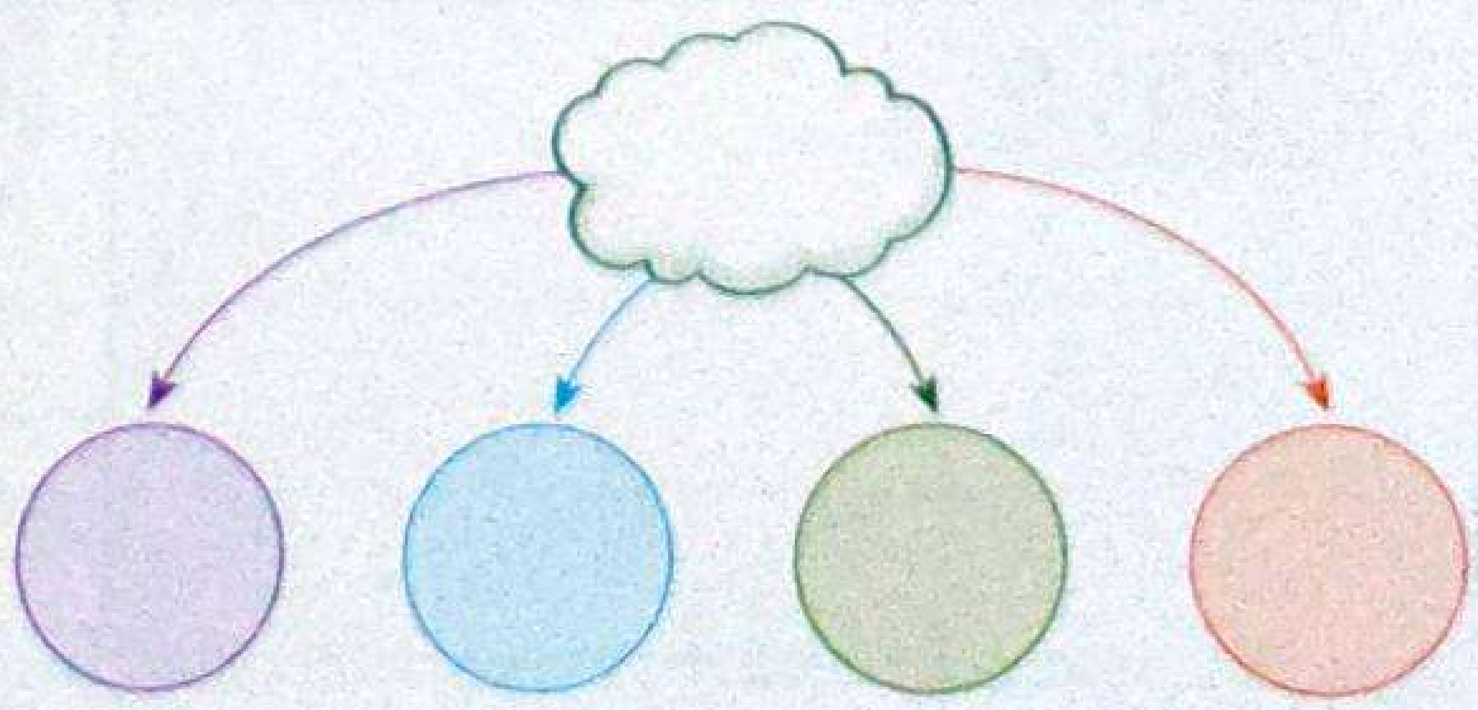
Each plate has ________ oranges.



• 8 marbles divided among 4 bags.



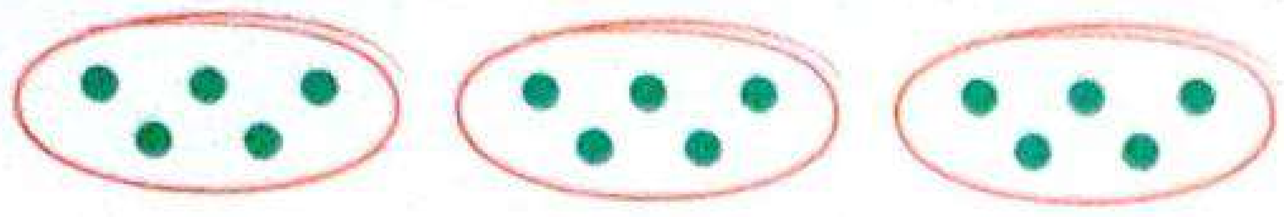
Each bag has ________ marbles.



• Ask your child to use 10 objects to make equal groups of 5.

Draw to show your work.
write how many in each group. The first one is done for you.

• Divide (15) ● into (3) equal groups.



5 in each group.

• Divide (8) ● into (4) equal groups.

______ in each group.

• Divide (14) ● into (2) equal groups.

______ in each group.

• Divide (3) ● into (3) equal groups.

______ in each group.

Write a sharing story problem using the given numbers.
Then solve the problem and show your work.




**12 , 3**

______

______

______

**15 , 5**

______

______

______

Work area

**Notes for parents**

• Draw with your child a simple picture with equal groups in it and tell a division story about it.

Solve the following problems.
You can draw a mathematical picture or use counters to help you.

- Rania has 18 eggs and wants to put them equally in 3 plates.



**How many eggs are there in each plate ?**

______________________________

______________________________

- Bassem has 28 stamps. He put an equal number of his stamps on each of 4 pages.




**How many stamps are on each page ?**

______________________________

______________________________

- Each bear wants to eat 5 fish. There are 25 fish.



**How many bears can be fed ?**

______________________________

______________________________

Work area

• Help your child choose a way for solving division problems.

- A class has **20** pupils.
  If they are divided into
  rows of **5** pupils each.



**How many rows are there ?**

- Shady saw some
  horses in a park
  He counted **36** legs.



**How many horses did Shady see ?**

Work area

## Challenge

- Amgad has **13** lemons

  Can he put all of them in two boxes, each of them has an equal number of lemons ? Explain.

Notes for parents

- Check for understanding of the division as sharing.

Place a smiley face

Lesson 30

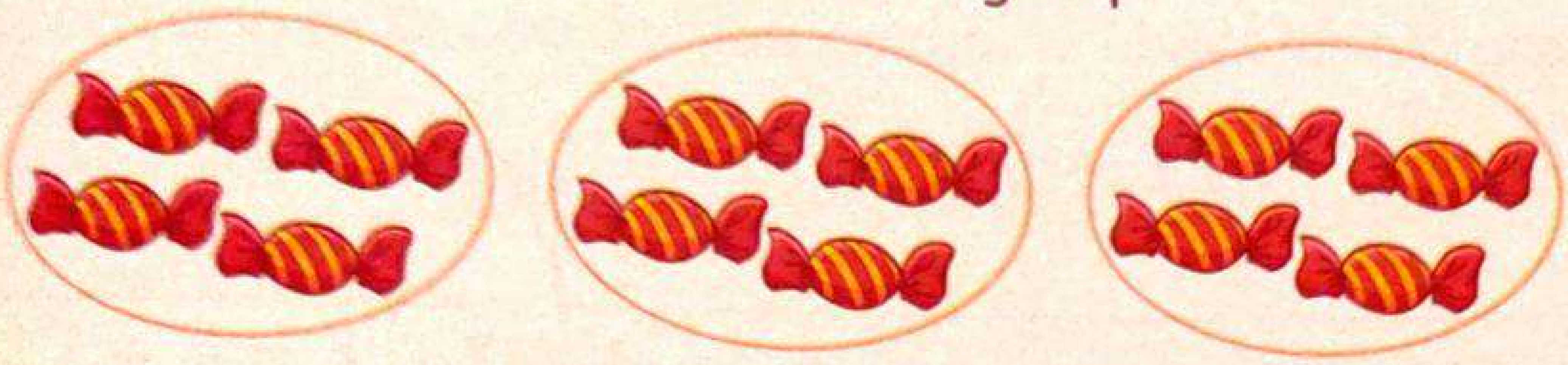
# The relation between multiplication and division

## Learn — Division symbol

*Vocabulary*

*Quotient*
*The answer to the division problem.*

- There are 12 sweets.
- You want to divide them among 3 groups and find the sweets number in each group.






- There are 4 sweets in each group.
- When you divided them in equal groups, you can express it by the division sentence.

**What you say : 12 divided by 3 equals 4**

**What you write :** 12 ÷ 3 = 4 → This is a division sentence

÷ : Division symbol
4 : Quotient

## Check

**Write the division sentence. Then solve it. The first one is done for you.**

| 16 divided by 2 | 20 divided by 5 | 24 divided by 3 |
|---|---|---|
| 16 ÷ 2 = 8 | ___ ◯ ___ ◯ ___ | ___ ◯ ___ ◯ ___ |
| **10 divided by 2** | **28 divided by 4** | **50 divided by 10** |
| ___ ◯ ___ ◯ ___ | ___ ◯ ___ ◯ ___ | ___ ◯ ___ ◯ ___ |

• Tell your child that the answer of division is called "Quotient".

## Practice




*You can draw pictures or use arrays to help.*

**Solve.**

| | | |
|---|---|---|
| $8 \div 2 =$ ____ | $12 \div 6 =$ ____ | $15 \div 3 =$ ____ |
| $16 \div 4 =$ ____ | $40 \div 5 =$ ____ | $20 \div 2 =$ ____ |
| $40 \div 10 =$ ____ | $21 \div 7 =$ ____ | $24 \div 4 =$ ____ |

**Join the equal answers.**

| | |
|---|---|
| $18 \div 3$ | $10 \div 5$ |
| $16 \div 2$ | $2 \times 3$ |
| $8 \div 4$ | $4 \div 1$ |
| $5 + 5$ | $4 + 4$ |
| $1 \times 4$ | $20 \div 2$ |

**Notes for parents**

- Ask your child to tell you how to use arrays or draw pictures to solve the division problems.

## Learn Relation between multiplication and division

- Nader drew 12 ✓s in two ways.
- He wrote two multiplication sentences about his picture.

$3 \times 4 = 12$ "**Think:** 3 groups of 4 is 12"

$4 \times 3 = 12$ "**Think:** 4 groups of 3 is 12"

- He can also write two division sentences about his picture.

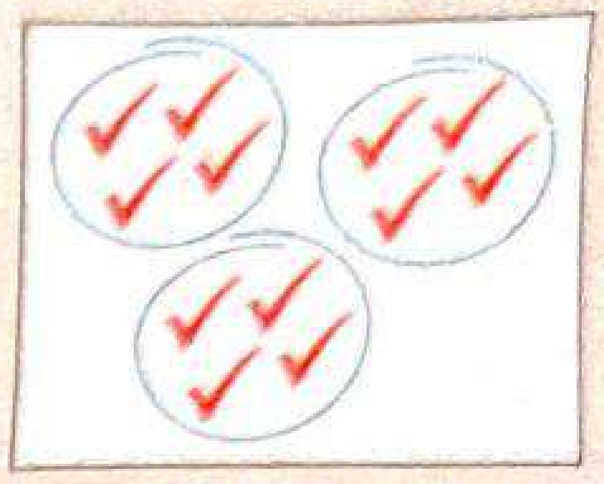
$12 \div 3 = 4$ "**Think:** 12 divided into 3 groups of 4"

$12 \div 4 = 3$ "**Think:** 12 divided into 4 groups of 3"

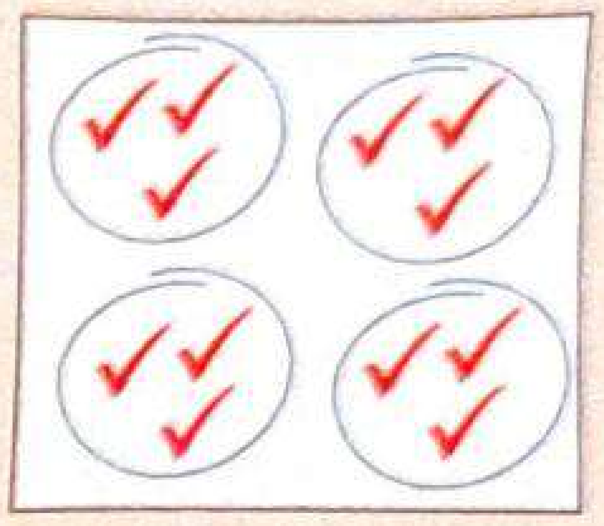
- These four number sentences form a **fact family** of the numbers 3 , 4 and 12.

**Vocabulary**

*Fact family*
*It is a set of related multiplication and division number sentences.*



$3 \times 4 = 12$



$4 \times 3 = 12$

## Check

**Draw and write the fact family of these numbers.**

Draw 2 groups of 5 ✓s and 5 groups of 2 ✓s.

____ × ____ = ____

____ × ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

- Remind your child of the commutative property of multiplication.

## Practice

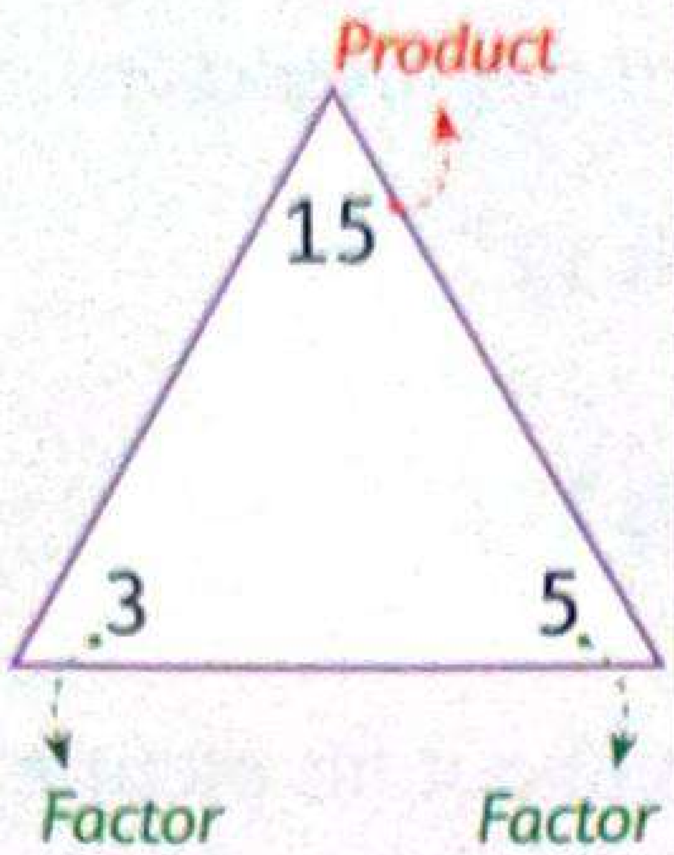
Write the fact family for each set of numbers. The first one is done for you.

3 × 5 = 15

5 × 3 = 15

15 ÷ 3 = 5

15 ÷ 5 = 3

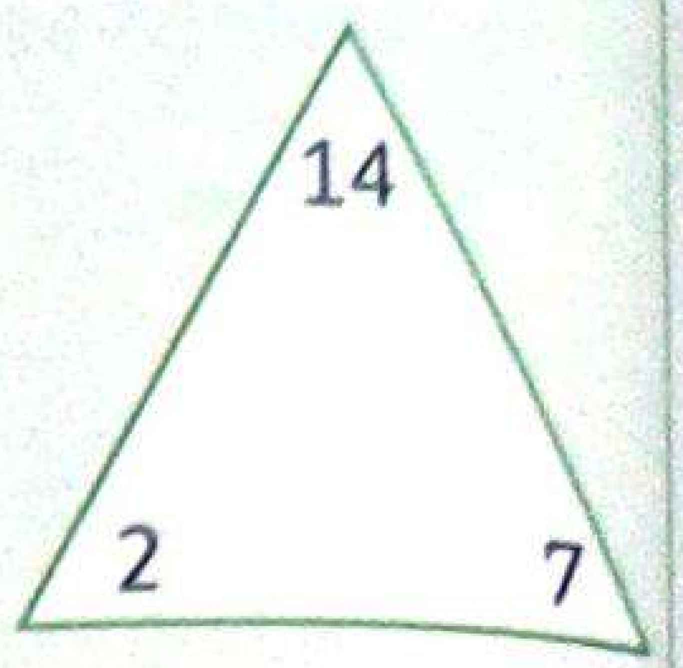



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

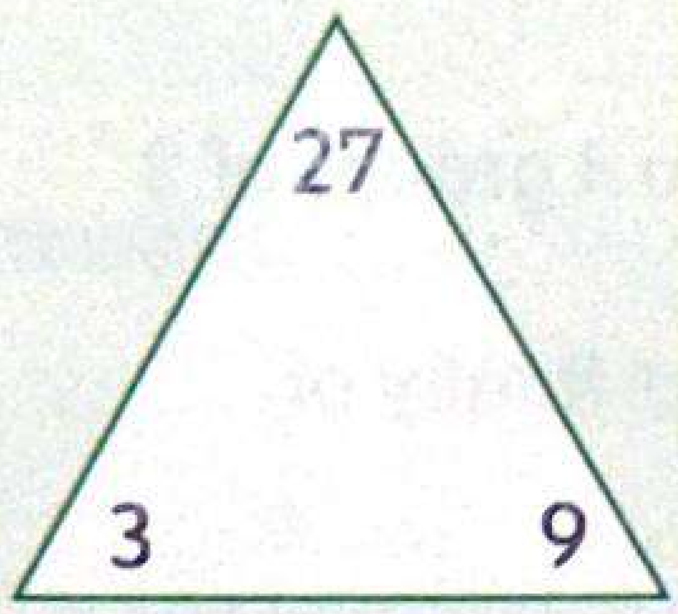



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

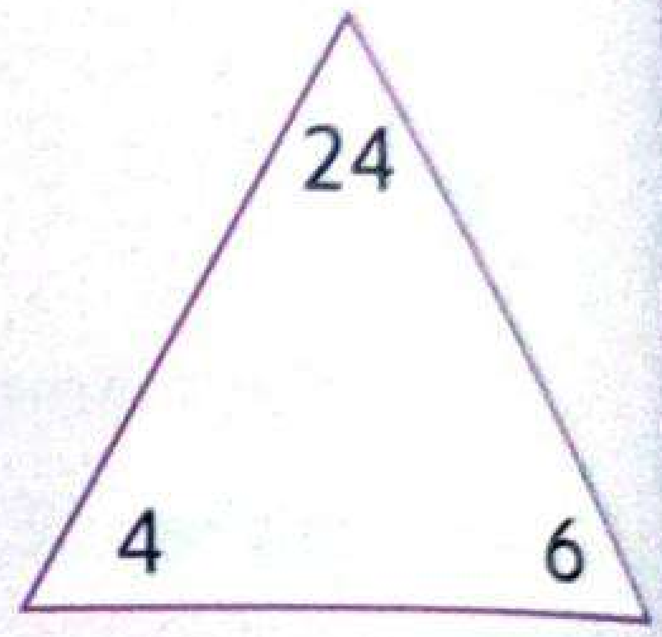



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___




Write the other facts from each family.

| 4 × 9 = 36 | 40 ÷ 5 = 8 | 6 × 3 = 18 |
|---|---|---|
| ________ | ________ | ________ |
| ________ | ________ | ________ |
| ________ | ________ | ________ |
| **2 × 8 = 16** | **13 ÷ 1 = 13** | **14 ÷ 2 = 7** |
| ________ | ________ | ________ |
| ________ | ________ | ________ |
| ________ | ________ | ________ |

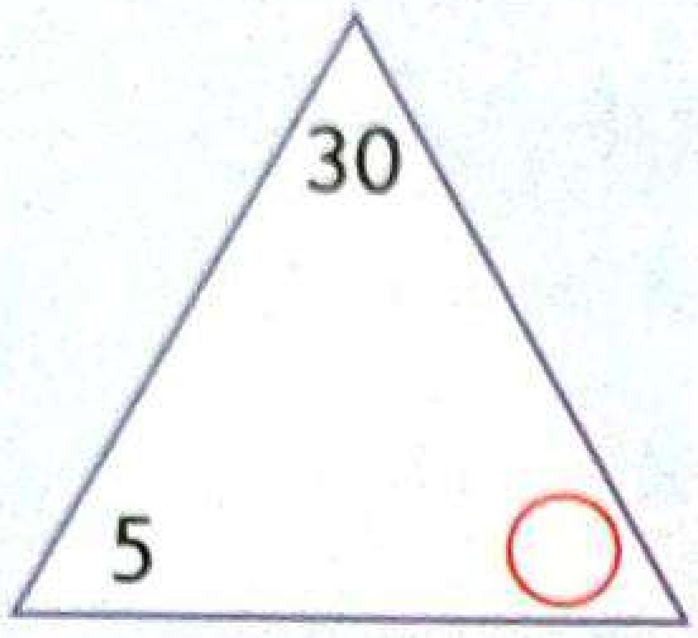
**Notes for parents**

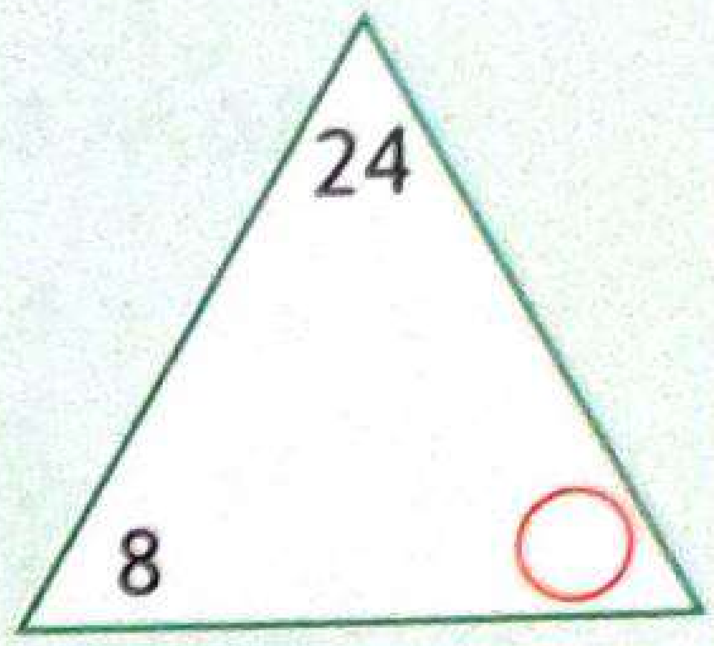
- Ask your child to write the fact family of the numbers 5 , 7 and 35.
- Help your child understand that any number divided by 1 is the same number.

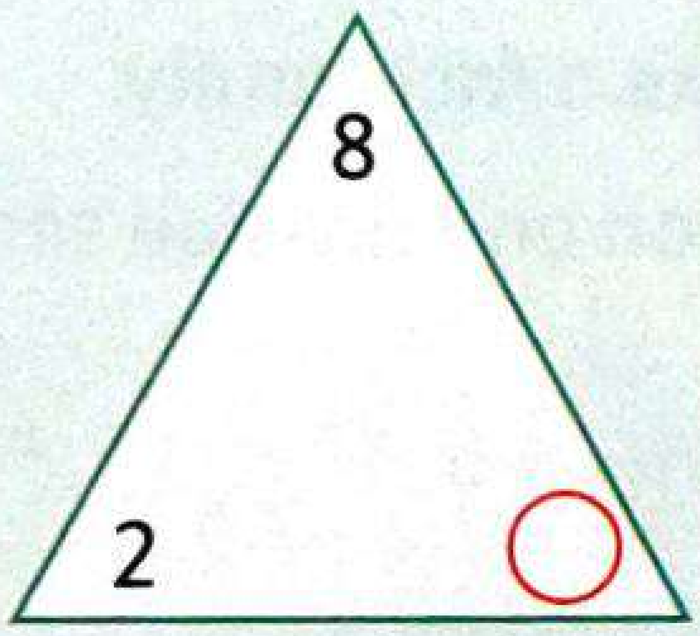
Find the missing factor in each triangle below. Then write the four numbers sentences that go with the fact family.

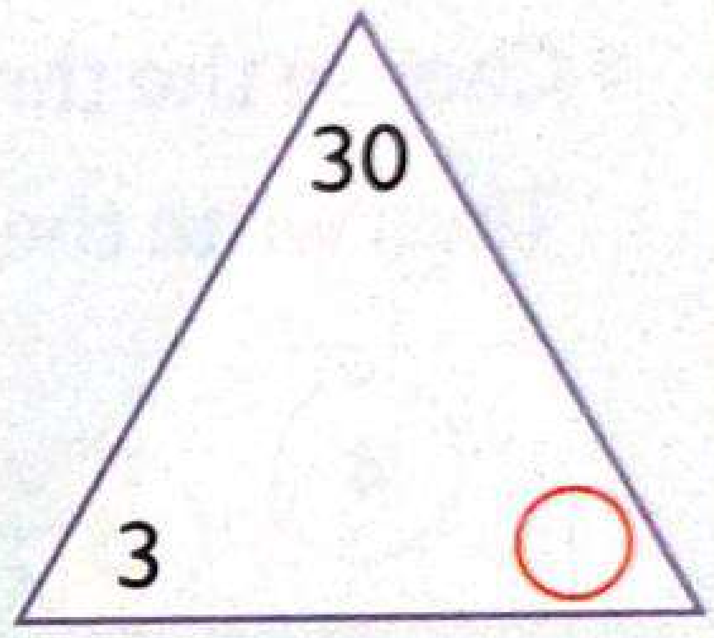
*Math tip*
*You may use counters to help.*






Complete.

$4 \times \square = 12$

$12 \div 4 = \square$

$2 \times \square = 14$

$14 \div 2 = \square$

$3 \times \square = 27$

$27 \div 3 = \square$

$7 \times \square = 21$

$21 \div 7 = \square$

$6 \times \square = 54$

$54 \div 6 = \square$

$\square \times 4 = 32$

$32 \div 4 = \square$

• Tell your child that he/she can use the multiples of the given factor to find the missing factor.

Choose which number sentence is not included in the same fact family.

**$9 \times 4 = 36$**

- ○ $4 \times 9 = 36$
- ○ $36 \div 4 = 9$
- ○ $36 \div 6 = 6$
- ○ $36 \div 9 = 4$

**$18 \div 3 = 6$**

- ○ $3 \times 6 = 18$
- ○ $18 \div 6 = 3$
- ○ $6 \times 3 = 18$
- ○ $9 \times 2 = 18$

**$24 \div 6 = 4$**

- ○ $4 \times 6 = 24$
- ○ $24 \div 3 = 8$
- ○ $6 \times 4 = 24$
- ○ $24 \div 4 = 6$

## Challenge

- Choose the three numbers that can make a fact family.

Then write the four related multiplication and division sentences.

4 6 30 36 9

____________________

____________________

____________________

____________________

9 2 5 12 10

____________________

____________________

____________________

____________________

40 5 4 8 24

____________________

____________________

____________________

____________________

21 6 3 8 24

____________________

____________________

____________________

____________________

**Notes for parents**

- Provide your child a space to explain his/her methods of thinking by drawing or use a set of counters to solve the problems.

Place a smiley face

# Activity

## Chapter 3

### Just like magic

**Multiply :**

| Letter | Problem | Answer |
|---|---|---|
| O | $4 \times 9$ | 36 |
| E | $3 \times 8$ | |
| I | $2 \times 5$ | |
| T | $8 \times 4$ | |
| G | $10 \times 9$ | |
| P | $3 \times 7$ | |
| Y | $8 \times 2$ | |
| V | $7 \times 4$ | |
| L | $5 \times 6$ | |

**Use the answers and the letter on each lamp to solve the code :**

___ (10)   ___ (30)  O (36)  ___ (28)  ___ (24)   ___ (24)  ___ (90)  ___ (16)  ___ (21)  ___ (32)



# Extra Practice

Chapter 3

**1** Join the equal answers.

| | |
|---|---|
| 2 × 6 | 30 + 6 |
| 3 × 8 | 3 × 4 |
| 4 × 9 | 2 × 4 |
| 3 × 3 | 4 × 6 |
| 5 + 3 | 1 × 9 |

**2** Put > , = or <.

| | | | | | |
|---|---|---|---|---|---|
| 4 × 2 | ◯ | 1 × 10 | 4 × 7 | ◯ | 5 × 6 |
| 3 × 9 | ◯ | 5 × 5 | 2 + 2 | ◯ | 2 × 2 |
| 2 × 9 | ◯ | 6 + 6 + 6 | 4 × 0 | ◯ | 4 + 0 |
| 10 × 4 | ◯ | 3 × 7 | 5 + 1 | ◯ | 5 × 1 |



• In this practice your child will review on all what he/she had learned in chapter 3

**3** Read and solve. You can use any strategy to solve.

- Sandy planted 3 seeds in each flower pot.
  She had 5 pots.

  How many seeds did she plant ?

  ______________________________

  ______________________________

- A guitar has 6 strings.

  How many strings are there in 4 guitars ?

  ______________________________

  ______________________________



**Work area**

**4** Use the 120 chart. Circle the multiples of 2.

14 9 23 8 10 17 20

**5** Use the 120 chart. Write the multiples of 3 up to 20.

______________________________

**6** Use the 120 chart. Write the multiples of 5 between 11 and 44.

______________________________

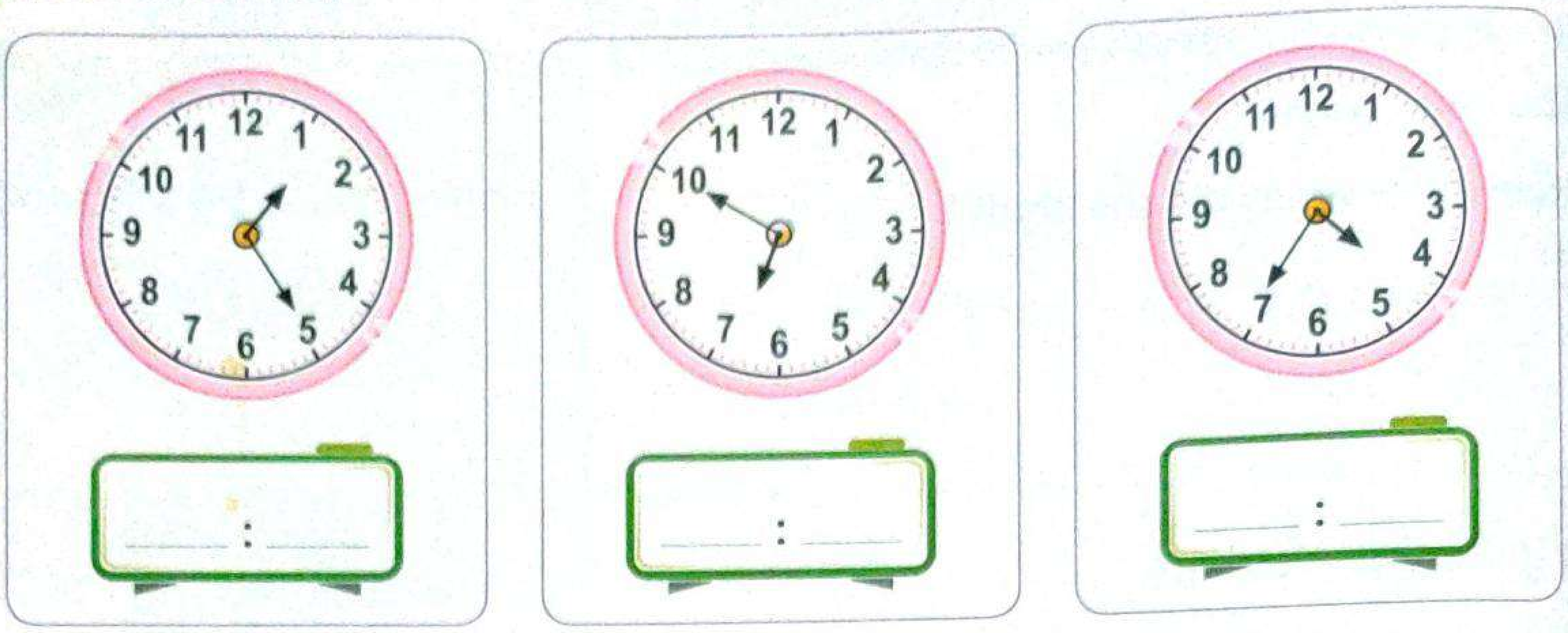
**7** Use the 120 chart. Write four common multiples of 2 and 3 smaller than 40.

______________________________

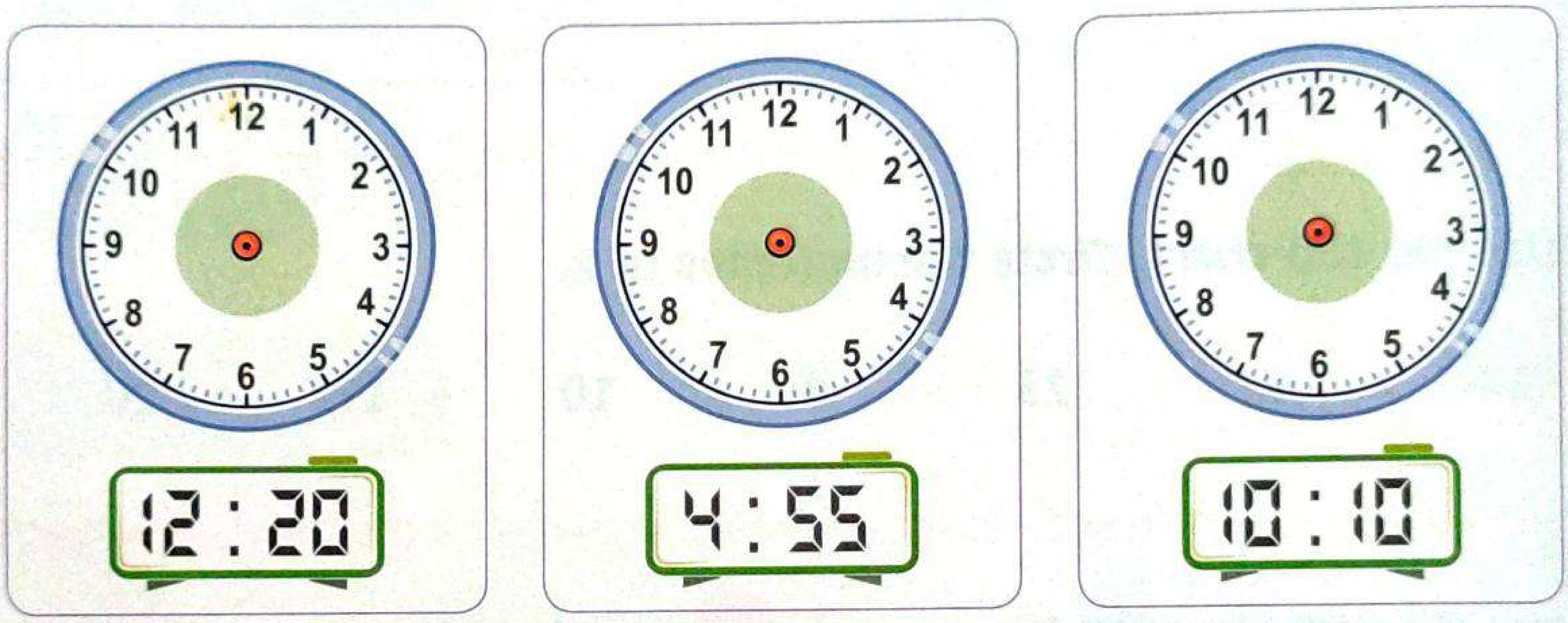
**8** Use the 120 chart. Underline the common multiples of 5 and 10.

15 60 35 80 50 100 10

**9** Write the time.



**10** Draw the clock hands.




**11** Answer the following.

Our Arabic lesson started at 11 : 00 It finished at 

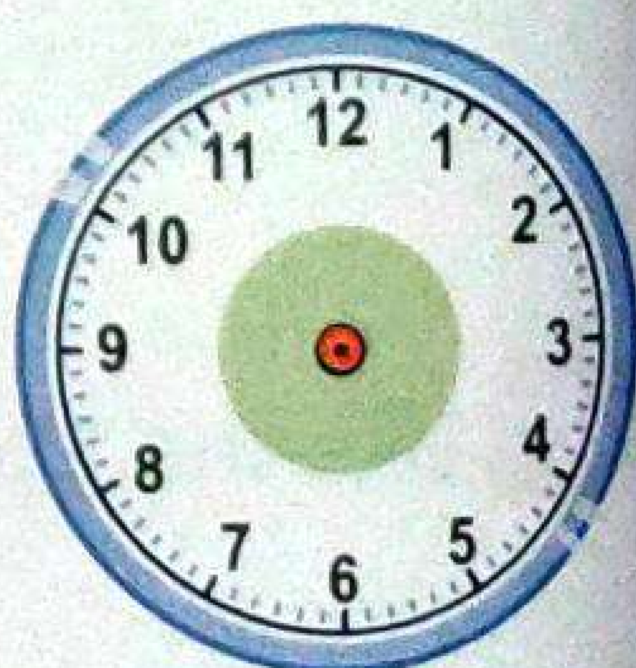
For how long did Arabic lesson take ?

Arabic lesson took __________ minutes.

**12** Draw the hands on the clock to show the time.

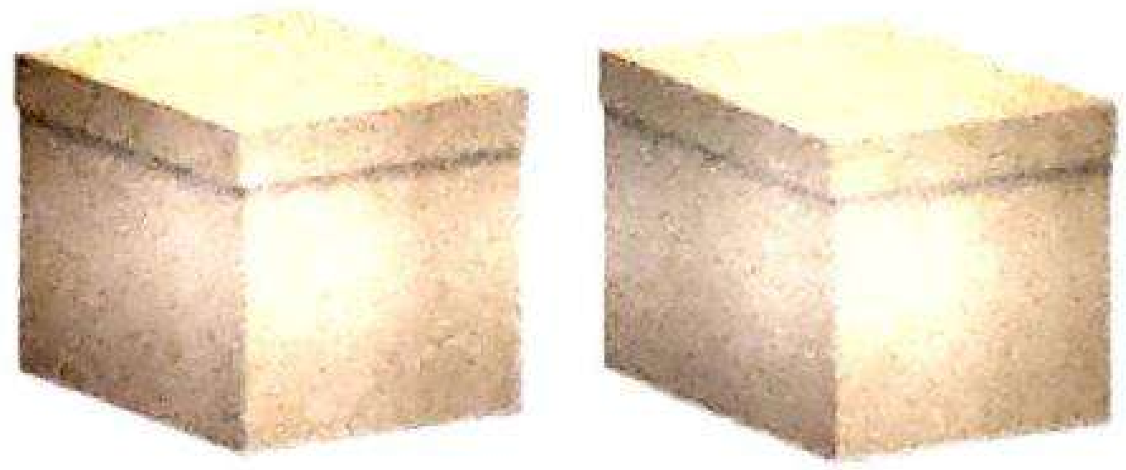
A TV show starts at 9 O'clock. It lasts for 55 minutes.

What time does the TV show finish ?

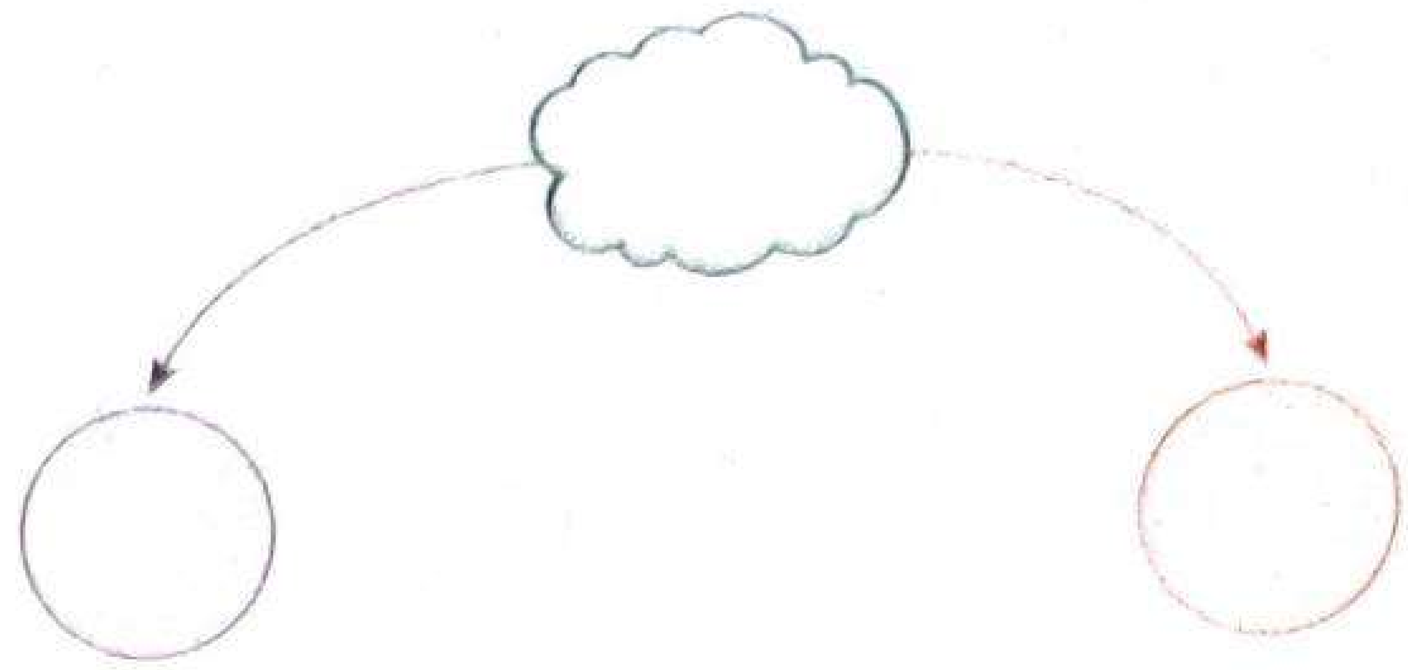


## 13 Draw to show equal groups.
Fill in the part - part - whole model. Complete.

• 8 crayons divided among 2 boxes.



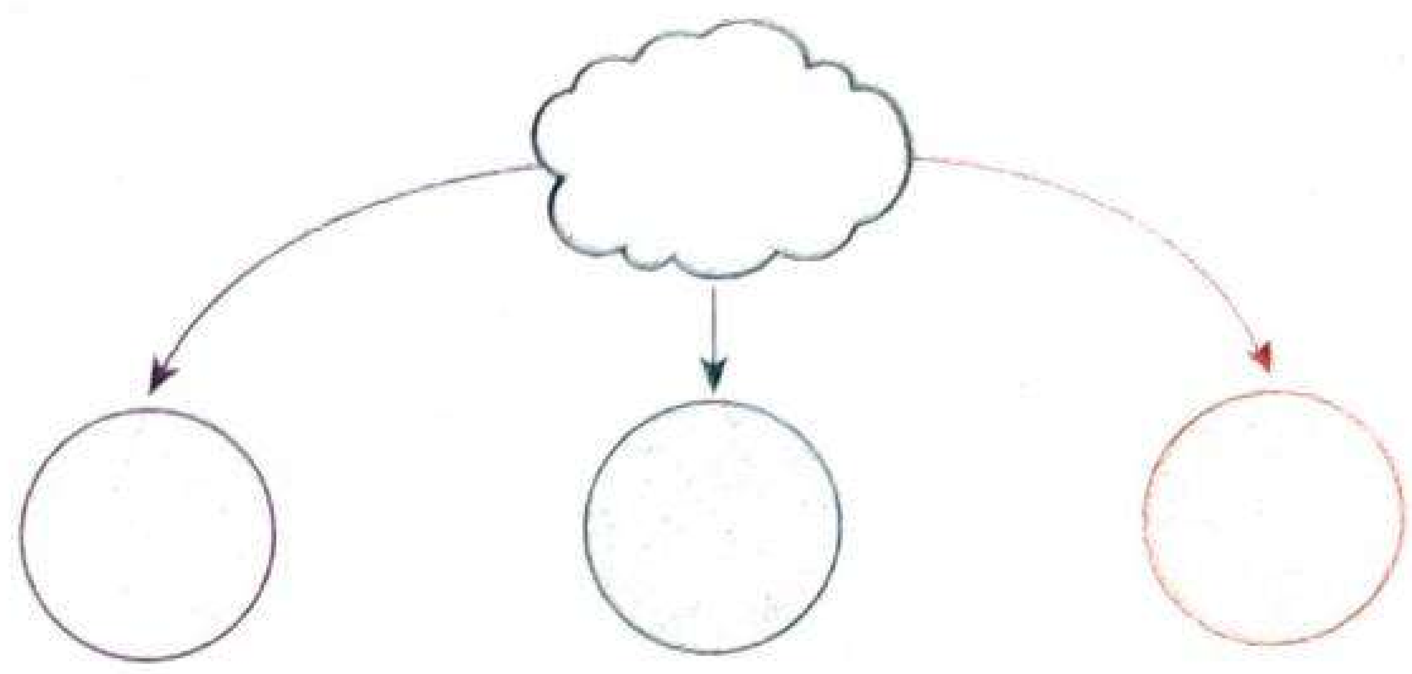
Each box has ________ crayons.



• 15 plates divided among 3 tables.



Each table has ________ plates.



## 14 Use the counters to make an array. Solve.

• How many groups of (6) are in (12) ?

There are ________ groups of 6 in 12.

• How many groups of (7) are in (21) ?

There are ________ groups of 7 in 21.

## 15 Solve. You can draw a picture or use counters to help you.

Sara has 20 lemons and wants to put them equally in 5 bags.

How many lemons are there in each bag ?

________________________________________

________________________________________



**16** Find each result.

| | | |
|---|---|---|
| 9 ÷ 3 = ___ | 10 ÷ 2 = ___ | 15 ÷ 5 = ___ |
| 12 ÷ 4 = ___ | 8 ÷ 1 = ___ | 30 ÷ 3 = ___ |
| 18 ÷ 3 = ___ | 25 ÷ 5 = ___ | 8 ÷ 2 = ___ |
| 18 ÷ 2 = ___ | 32 ÷ 4 = ___ | 10 ÷ 5 = ___ |

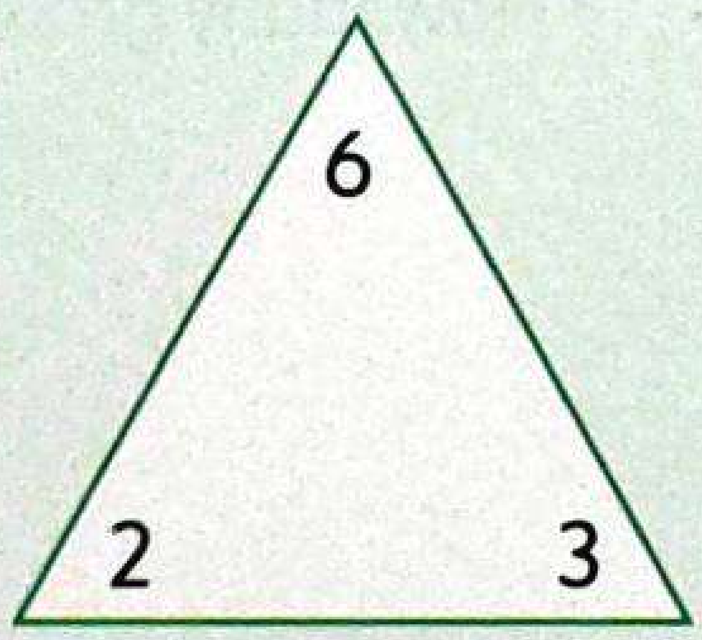
**17** Write the fact family for each set of numbers.

___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

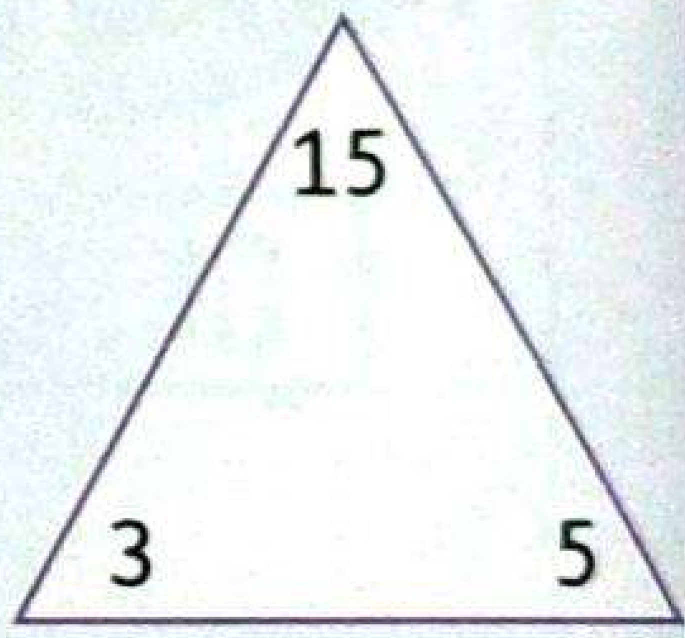



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

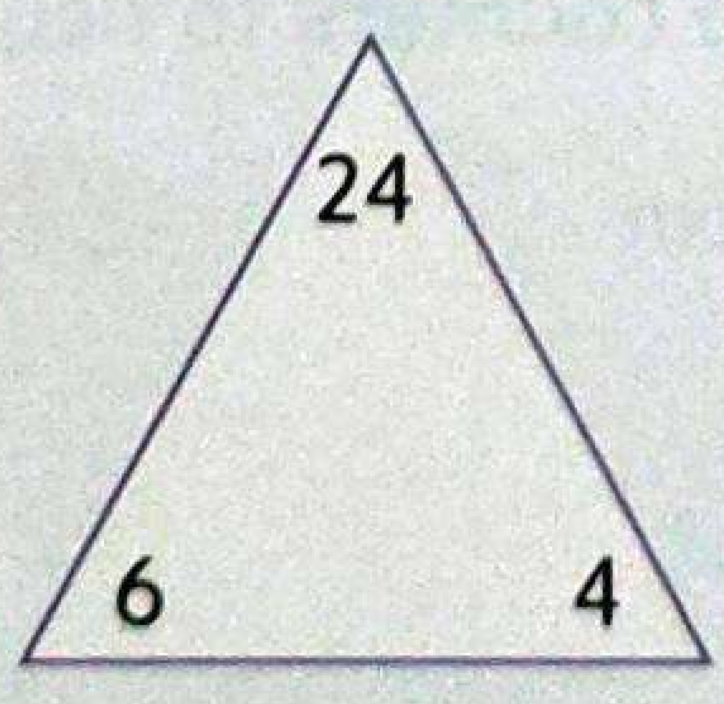



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

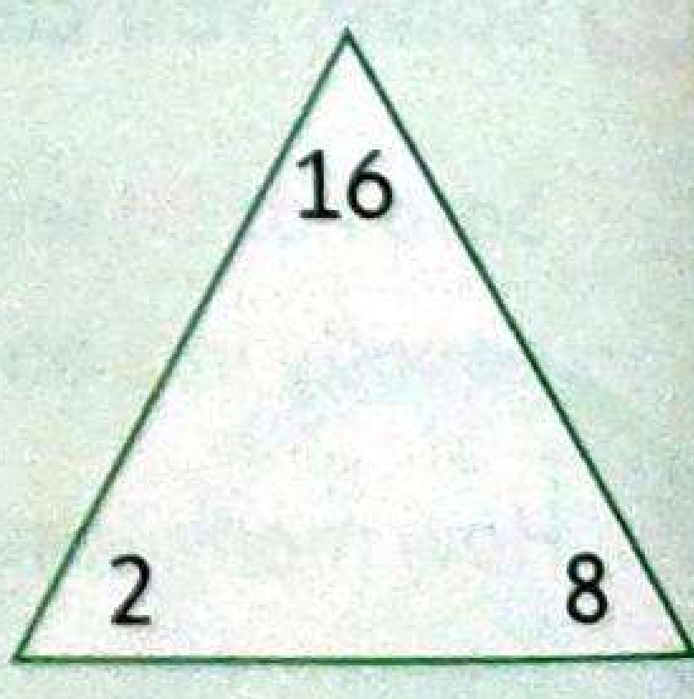



___ × ___ = ___

___ × ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___



# Assessment

## Chapter 3

**1** Solve.

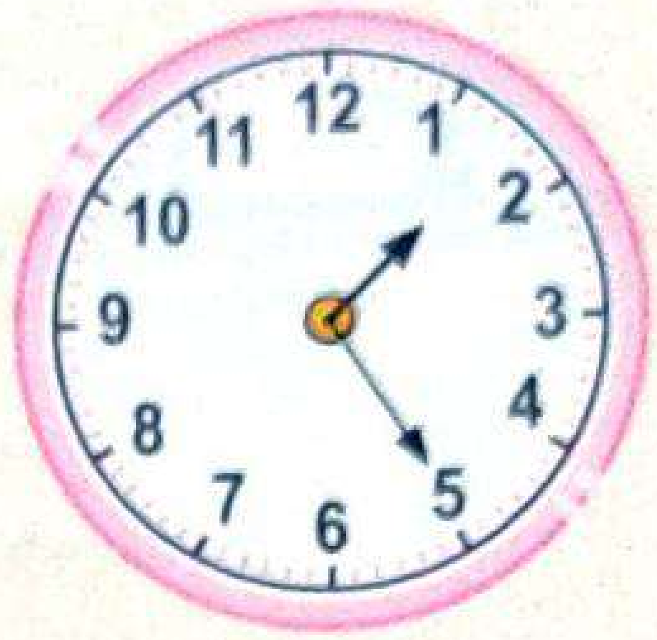
| | | | | | |
|---|---|---|---|---|---|
| 2 × 5 | ☐ | 3 × 4 | ☐ | 14 ÷ 2 | ☐ |
| 6 ÷ 3 | ☐ | 6 × 5 | ☐ | 20 ÷ 5 | ☐ |

**2** Write each factor pair and the factors of the number 18.

| | |
|---|---|
| ____ × ____ | ____ × ____ |
| ____ × ____ | ____ × ____ |
| ____ × ____ | ____ × ____ |

Factors are ____________________

**3** Write the time.



____ : ____

**4** Choose the correct answer.

- ______ is a common multiple of 2 and 3. (4 or 12 or 8 or 5)
- 8 × 0 = ______ (0 or 8 or 80 or 9)
- ______ is a multiple of 5. (23 or 14 or 56 or 15)
- 2 × ______ = 12 (10 or 8 or 14 or 6)
- The minute hand will point to number ______ when 50 minutes have passed. (5 or 10 or 8 or 4)

**5** Ahmed bought 5 packs of ping pong balls. Each pack has 3 balls.

How many balls are there ?

______________________________

______________________________

Work area



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# Chapter 4



## Outcomes

**At the end of chapter four, your child will be able to:**

### Lesson 31

- Identify the attributes of two-dimensional shapes.
- Define categories based on attributes.
- Sort two-dimensional shapes based on their attributes.
- Define polygon and parallelogram.

### Lessons 32 & 33

- Describe the attributes of quadrilaterals.
- Compare and contrast quadrilaterals.
- Sort quadrilaterals using a Venn diagram.
- Apply rules to sort quadrilaterals.
- Create a bar graph representing quadrilaterals to create a picture.

### Lessons 34 & 35

- Use manipulatives to build rectangles with specified dimensions.
- Calculate the area of rectangles in square units.
- Determine the area of rectangles using strategies related to multiplication.

### Lesson 36

- Create and describe multiple rectangles with the same area.
- Explain and model the commutative property of multiplication.

### Lesson 37

- Define area in his/her own words.
- Apply strategies to measure area.

### Lessons 38 to 40

- Divide arrays into smaller arrays to solve multiplication problems.
- Explain why dividing arrays makes it easier to solve multiplication problems.
- Model the distributive property of multiplication using arrays.
- Apply the distributive property to solve multiplication problems.
- Explain the distributive property of multiplication.
- Reflect on understanding of multiplication and the distributive property of multiplication.

## Key vocabulary

- Polygon
- Closed figure
- Attribute
- Quadrilateral
- Parallelogram
- Rhombus
- Trapezium
- Hexagon
- Octagon
- Parallel
- Vertex
- Vertices
- Area
- Array
- Dimensions
- Square unit
- Product
- Factors
- Commutative Property
- Distributive Property

Lesson

# 31 Polygons - Parallelograms

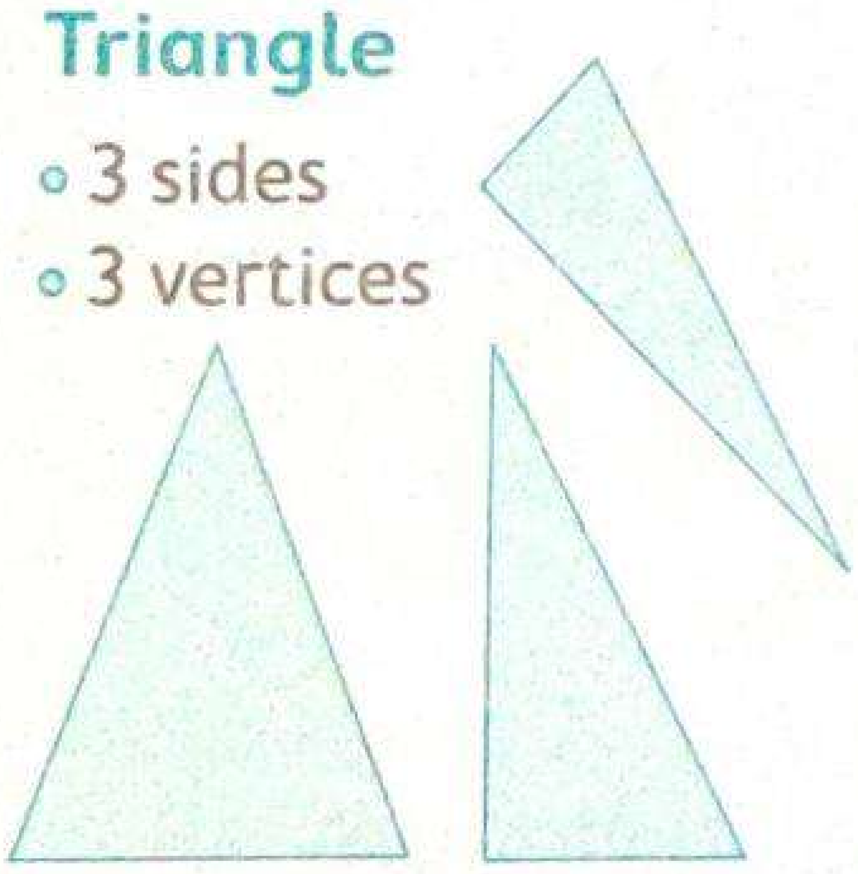
## Learn Polygons

> *Vocabulary*
> *A polygon* is a closed figure with straight sides.
> *Closed figure* is a shape does not have any gaps between the lines that make it.

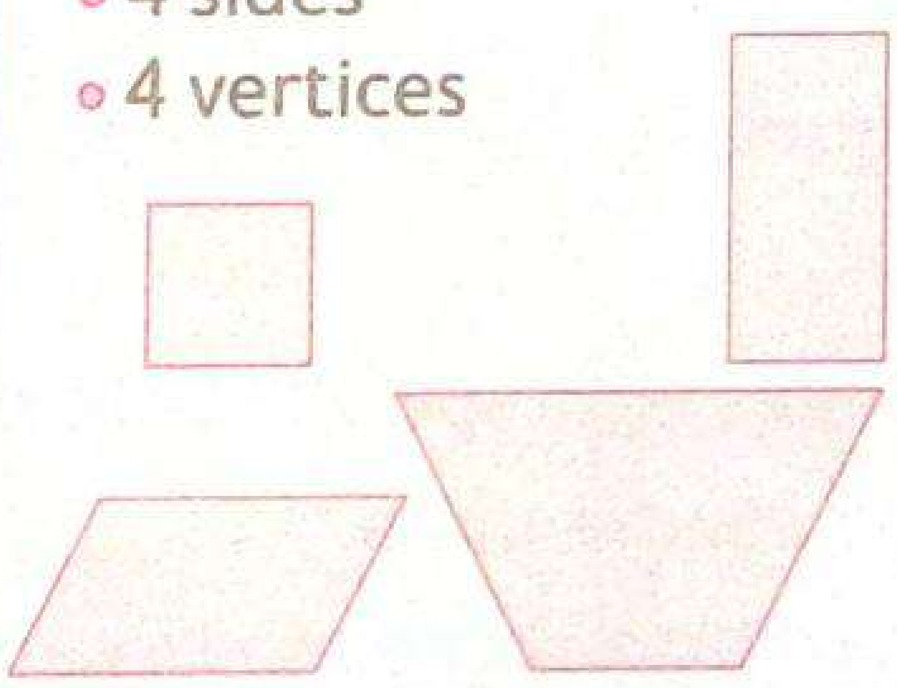
- Polygons are closed two-dimensional figures.
- Each figure has a spacific name but it is also a part of a larger category called polygons.

**Examples for polygons :**

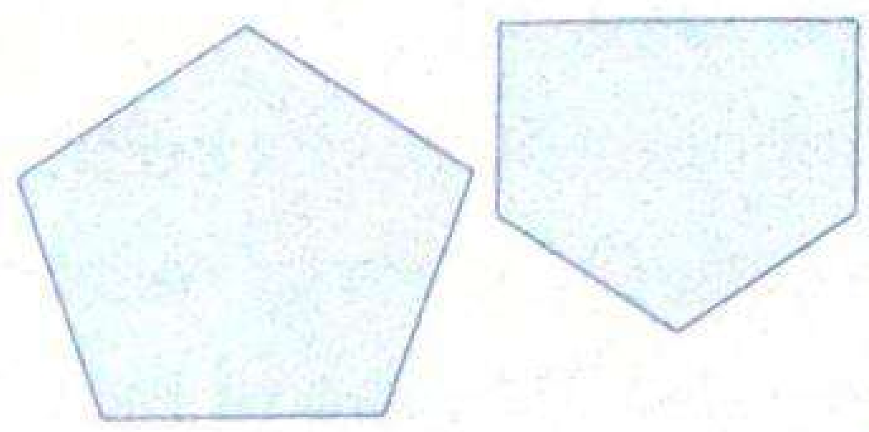
**Triangle**
- 3 sides
- 3 vertices



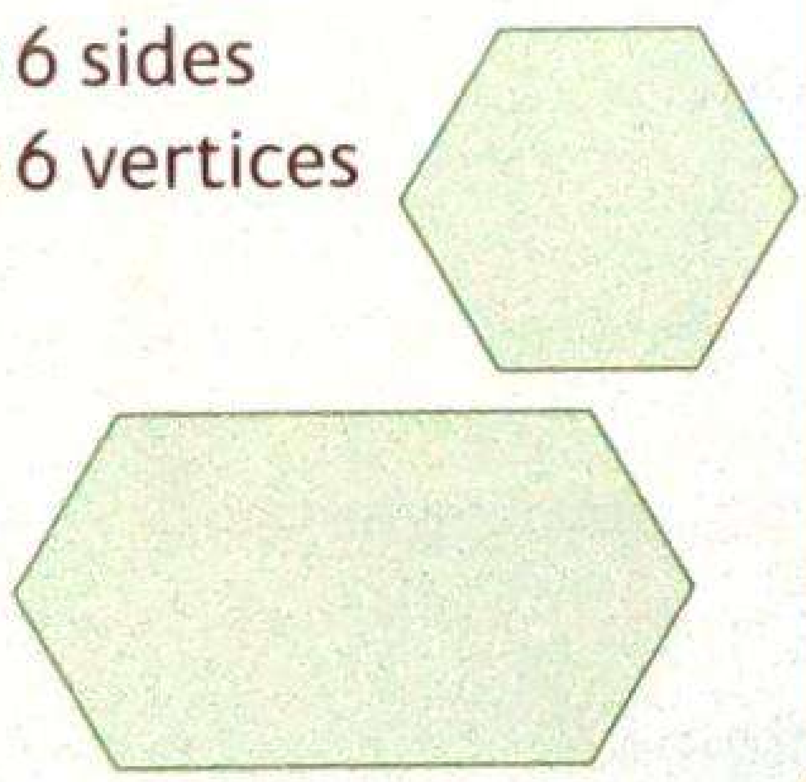
**Quadrilateral**
- 4 sides
- 4 vertices



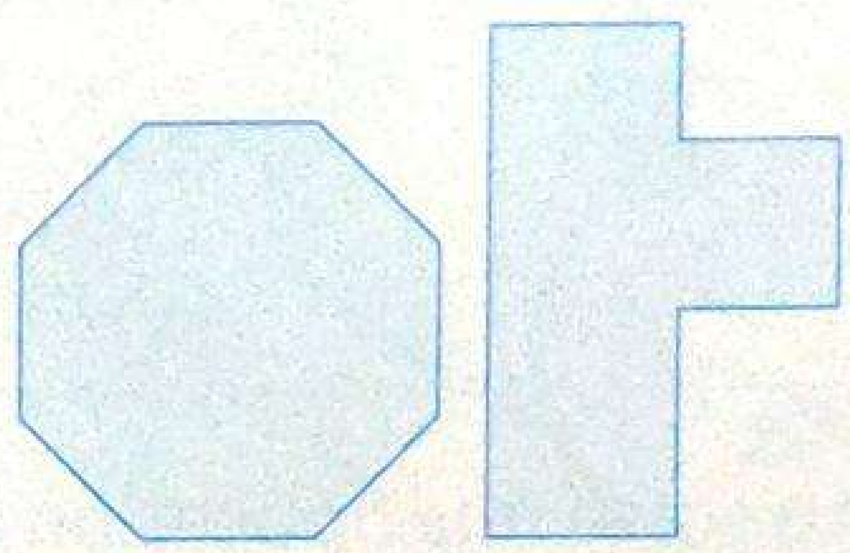
**Pentagon**
- 5 sides
- 5 vertices

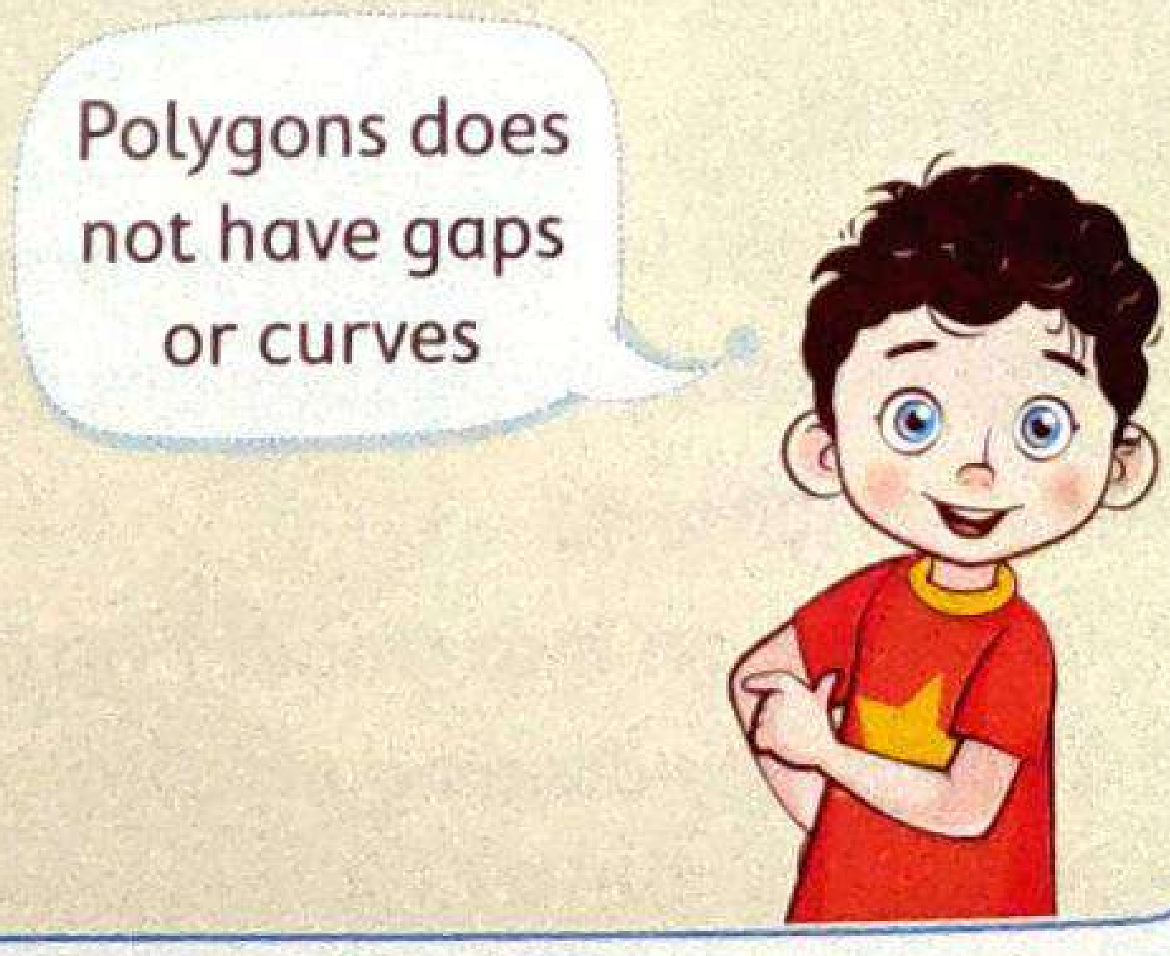


**Hexagon**
- 6 sides
- 6 vertices



**Octagon**
- 8 sides
- 8 vertices

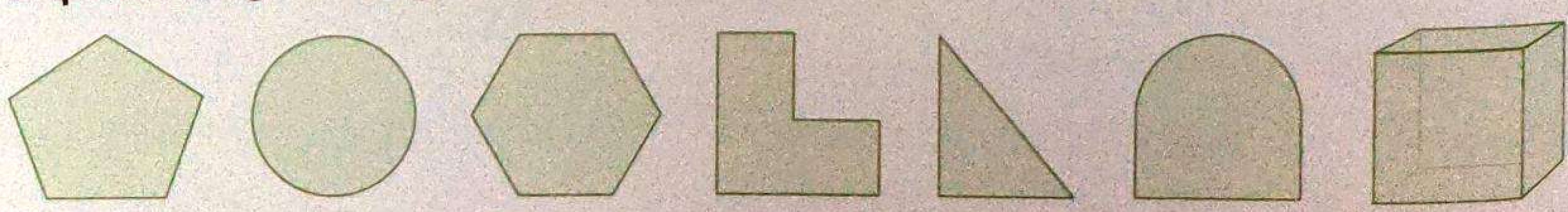





**Note :** The number of sides = the number of vertices.

## Check

**Are the following figures polygons ? Tick the polygons. Explain why or why not.**



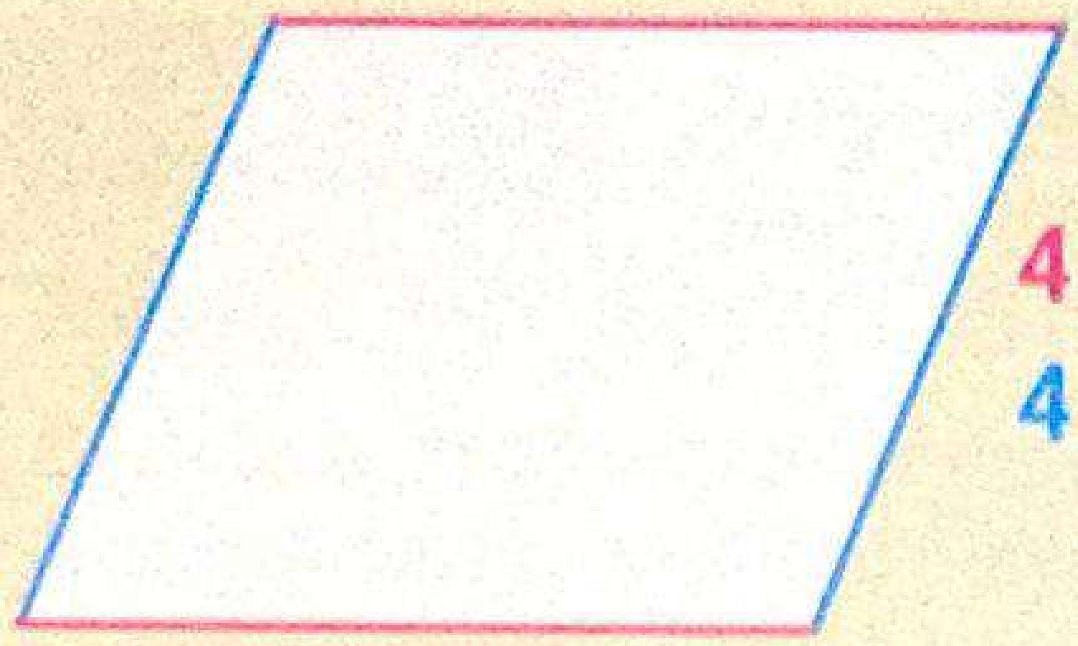
## Practice

Determine how many sides and vertices each shape has. Check if the shape is a polygon or not.

| Shape | Name | Attributes | | Polygon |
|---|---|---|---|---|
| | | Sides | Vertices | |
|  | Triangle | ______ | ______ | |
|   | Trapezium | ______ | ______ | |
|   | Rectangle | ______ | ______ | |
|  | Pentagon | ______ | ______ | |
|   | Square | ______ | ______ | |
|  | Circle | ______ | ______ | |
|   | Hexagon | ______ | ______ | |
|  | Rhombus | ______ | ______ | |

## Learn Parallelogram

- A **parallelogram** is a quadrilateral shape (has four sides) that has each two opposite sides equal in length and parallel.

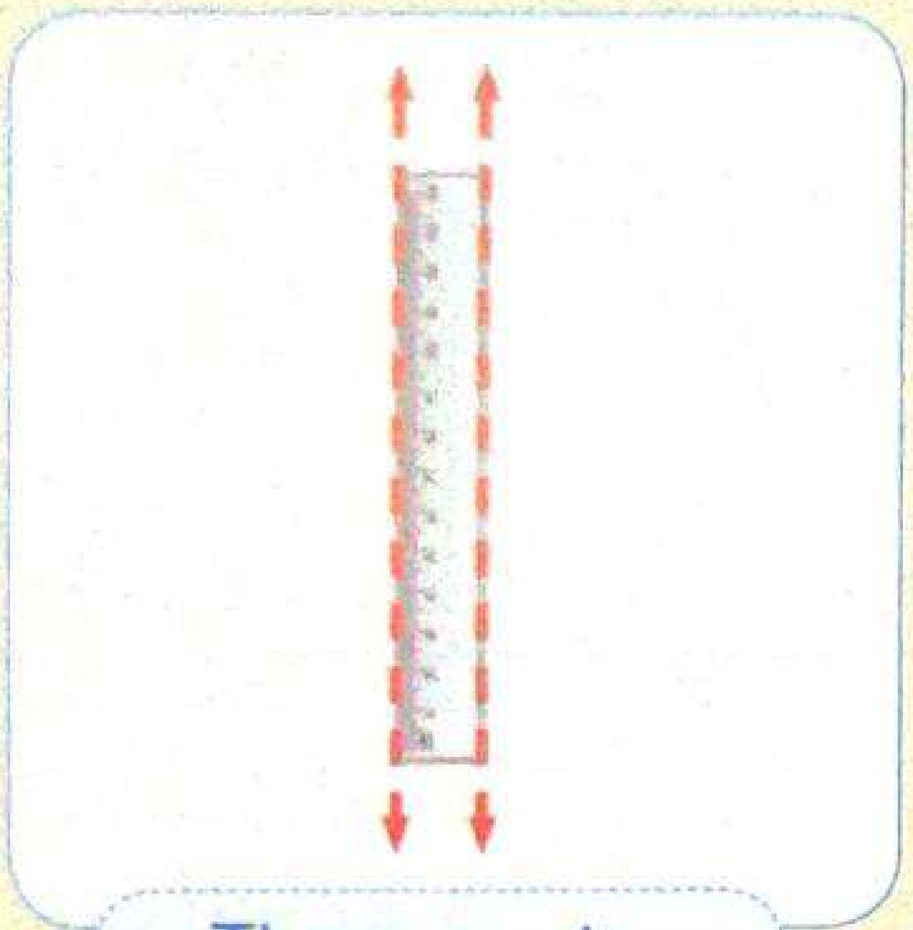


4 Vertices
4 Sides

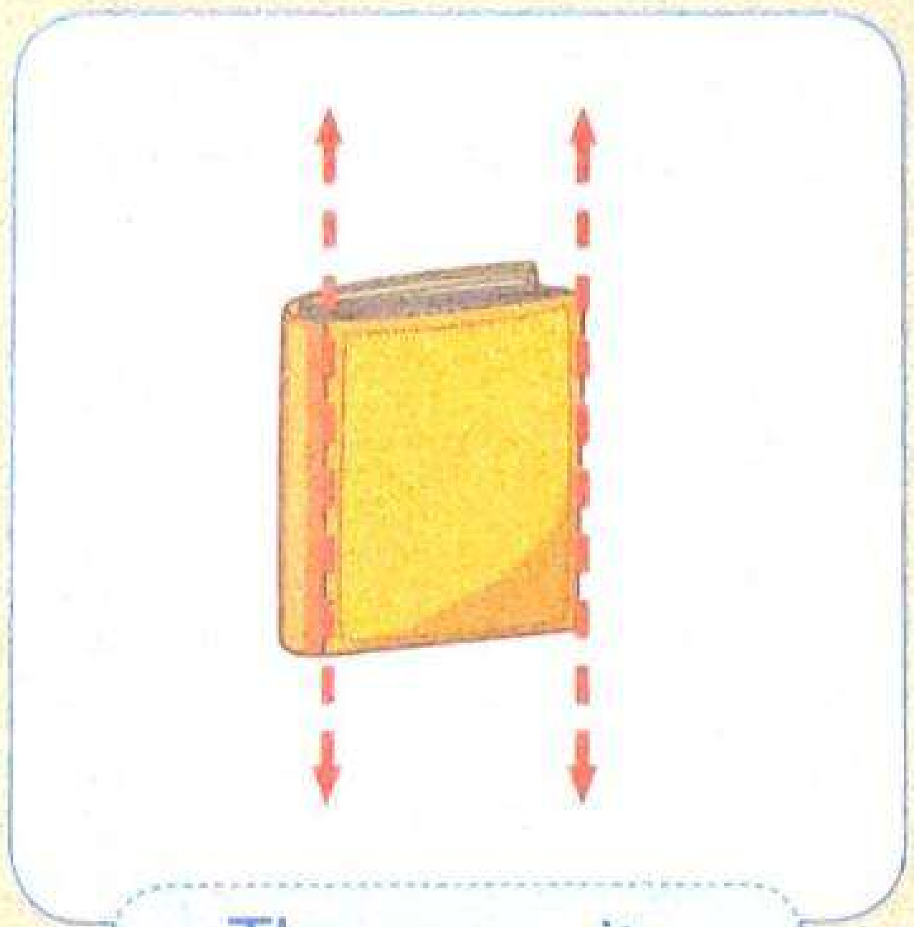
The blue lines are equal in length and parallel to each other and the red lines are equal in length and parallel to each other.



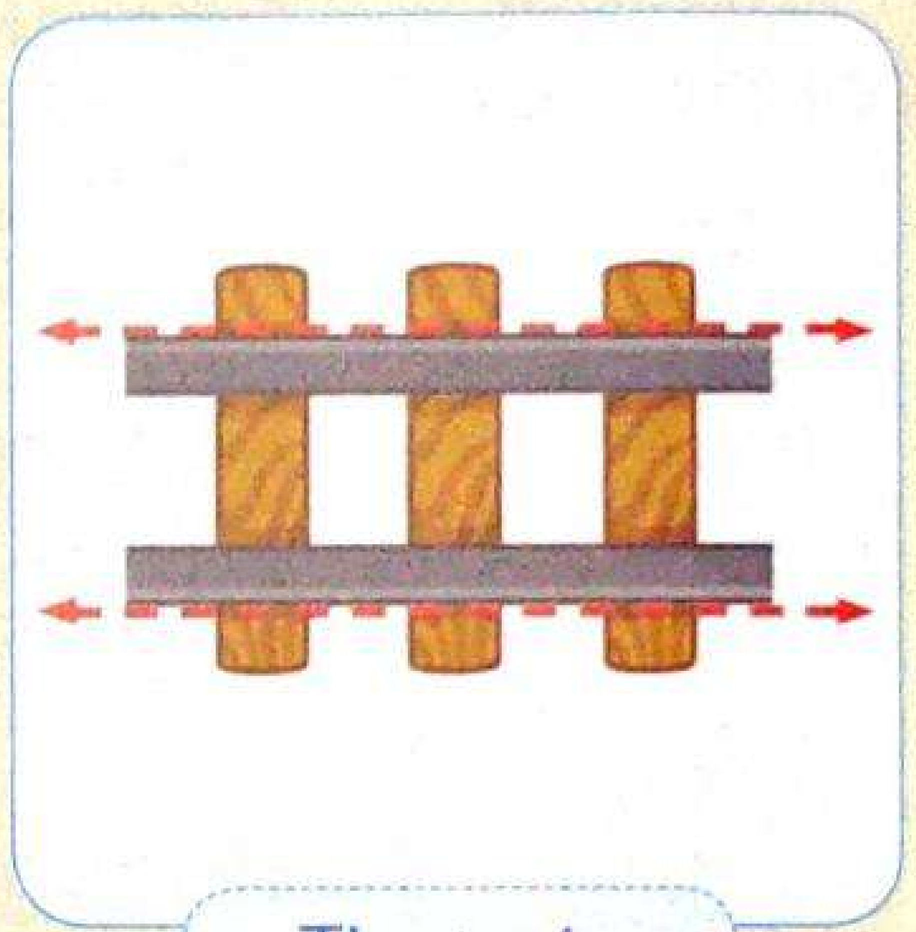
Examples for parallel lines :



The opposite edges of a ruler



The opposite edges of a book



The train tracks

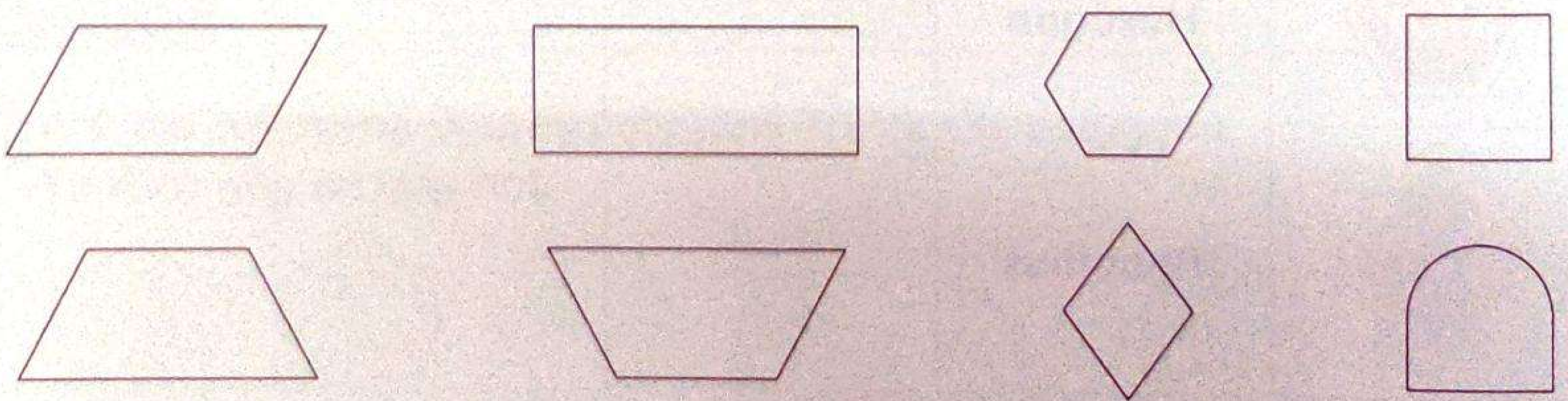
Parallel lines can go on forever and never intersect.

## Check

All rectangles, squares and rhombuses are also parallelograms.



**Color the parallelogram of each. Explain why or why not.**

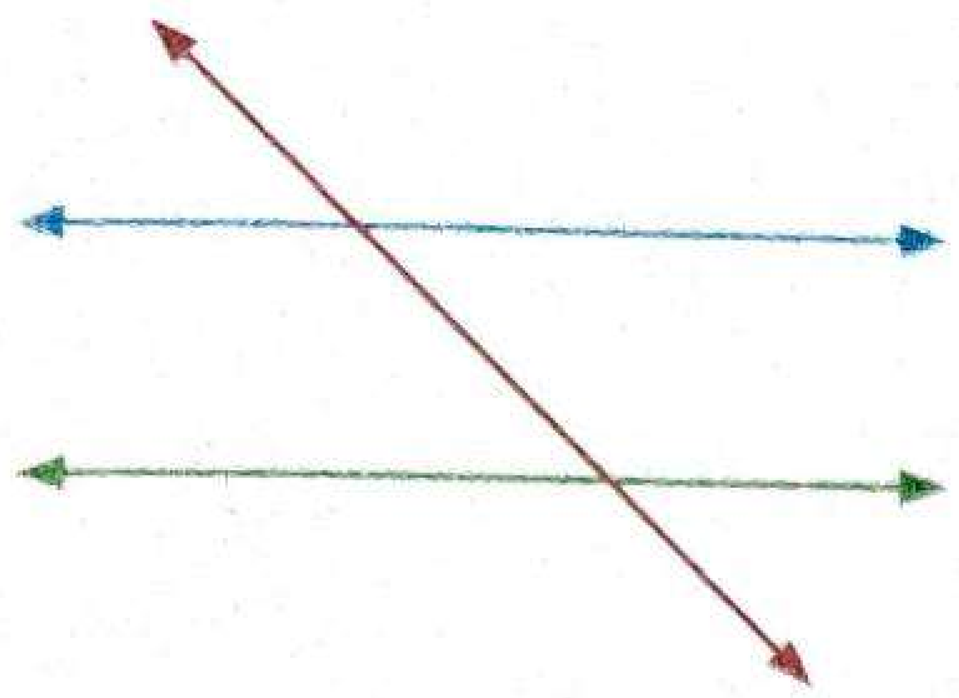


**Notes for parents**

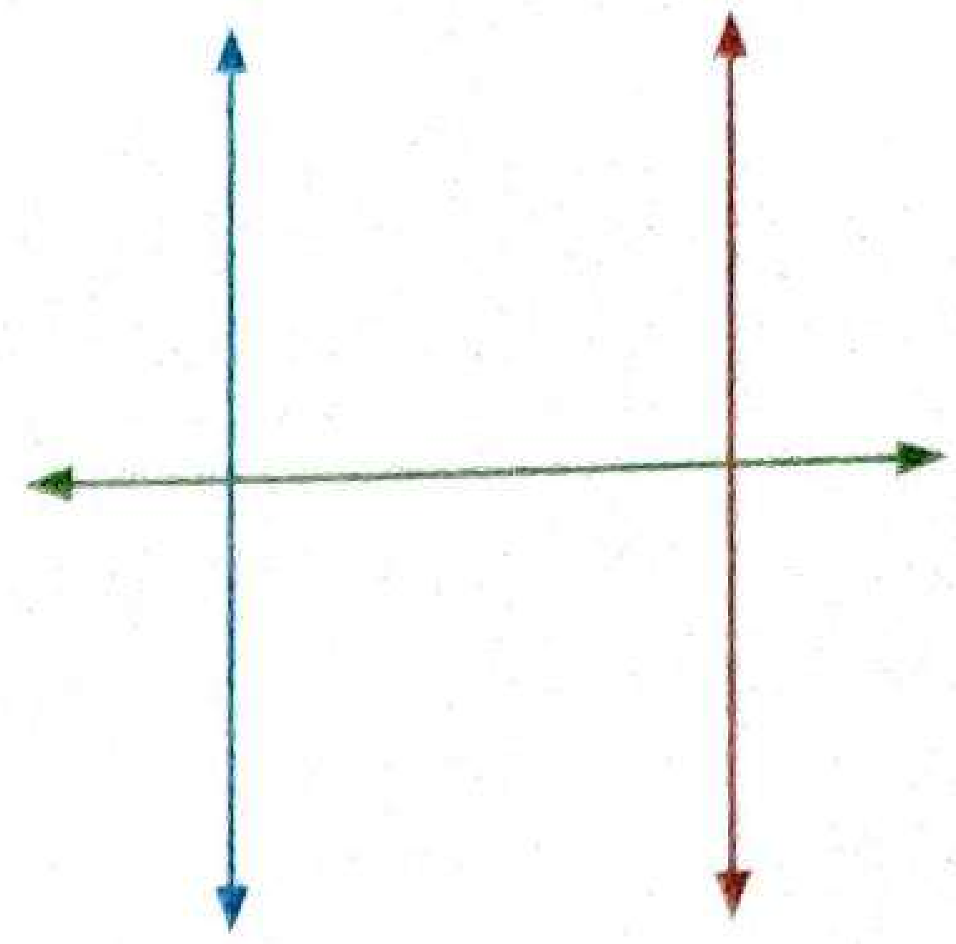
- Let your child recognize that rectangles, squares and rhombuses are also parallelograms.

## Practice

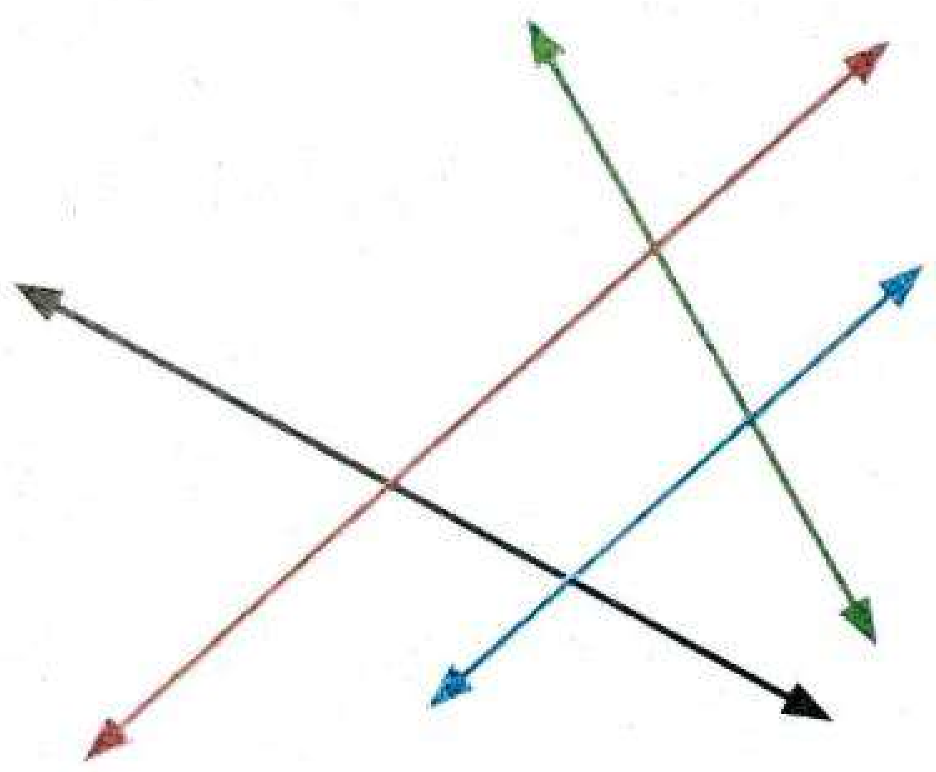
Write the colors of each pair of parallel lines. The first one is done for you.



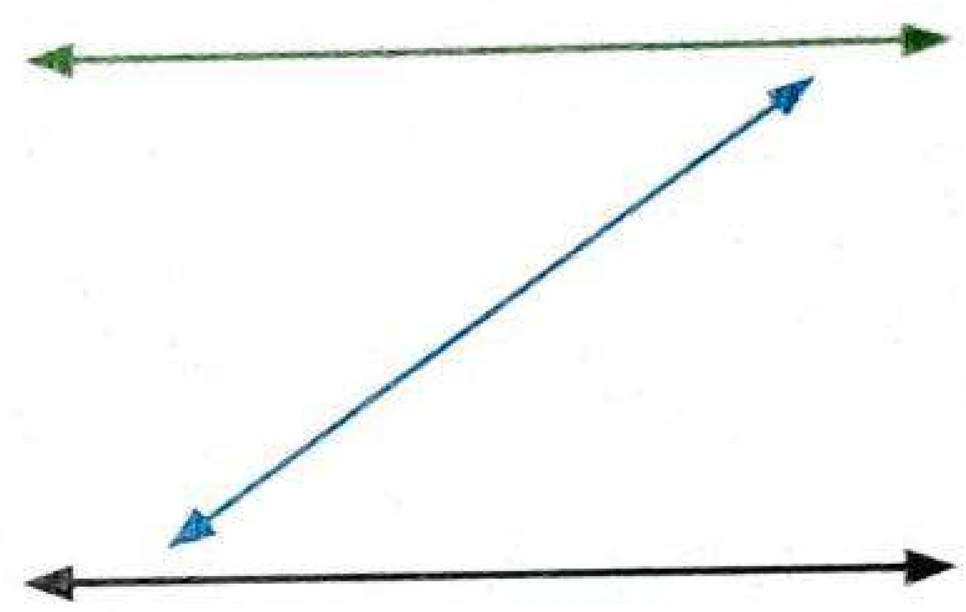
Blue and green



_________ and _________

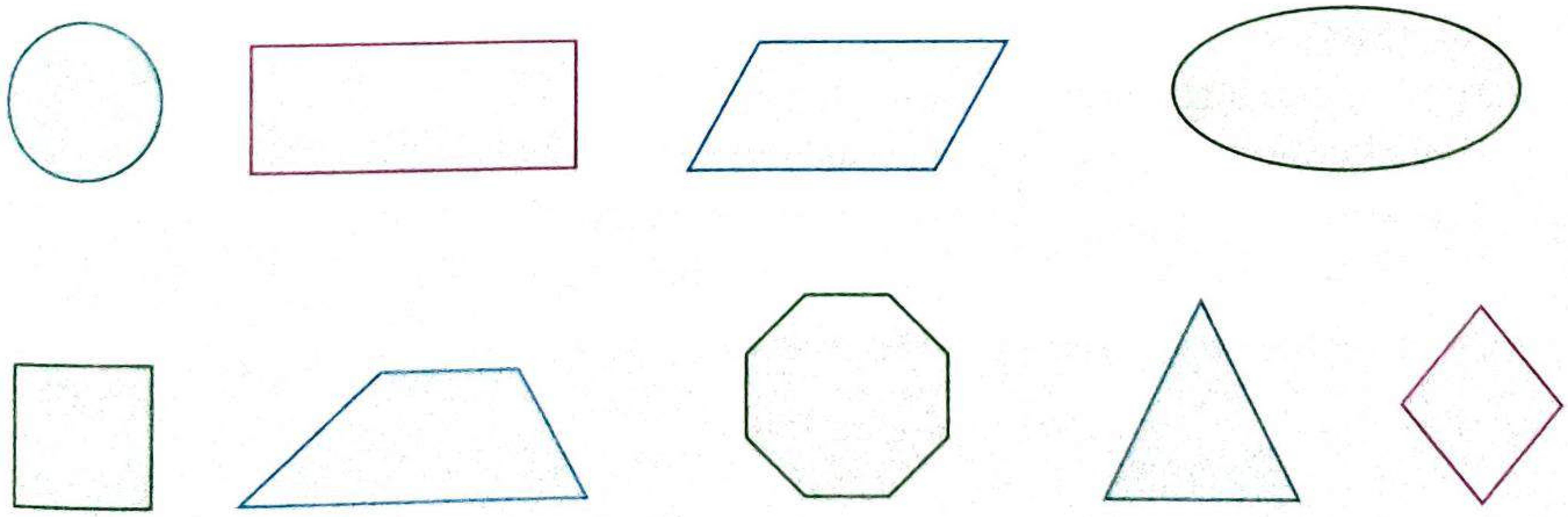


_________ and _________



_________ and _________

Cross out the shape that does not show a parallelogram.
Explain why, write the examples that show a parallelogram.



- Examples of parallelogram : _________ , _________ , _________

# Lessons 32 & 33 Quadrilaterals

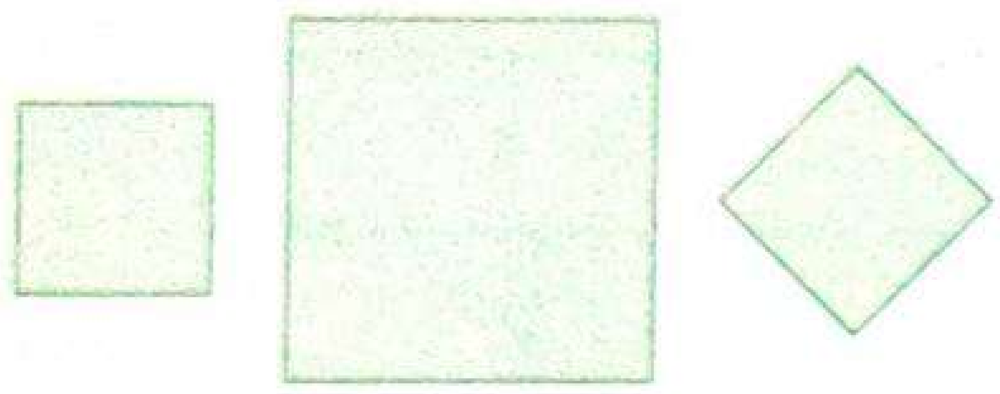
## Learn Quadrilaterals

*Vocabulary*

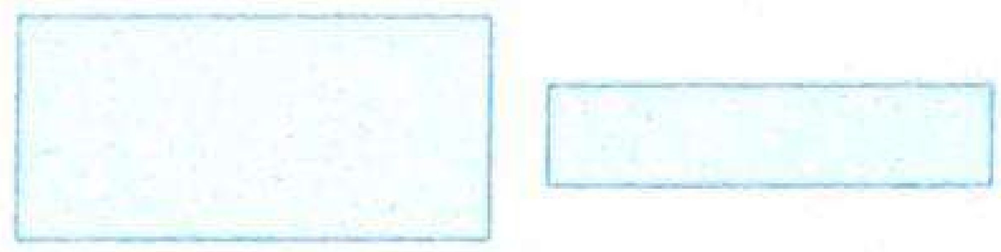
*Quadrilateral is a four-sides polygon has four straight sides and four vertices*

- Quadrilaterals are polygons with 4 straight sides and 4 vertices.

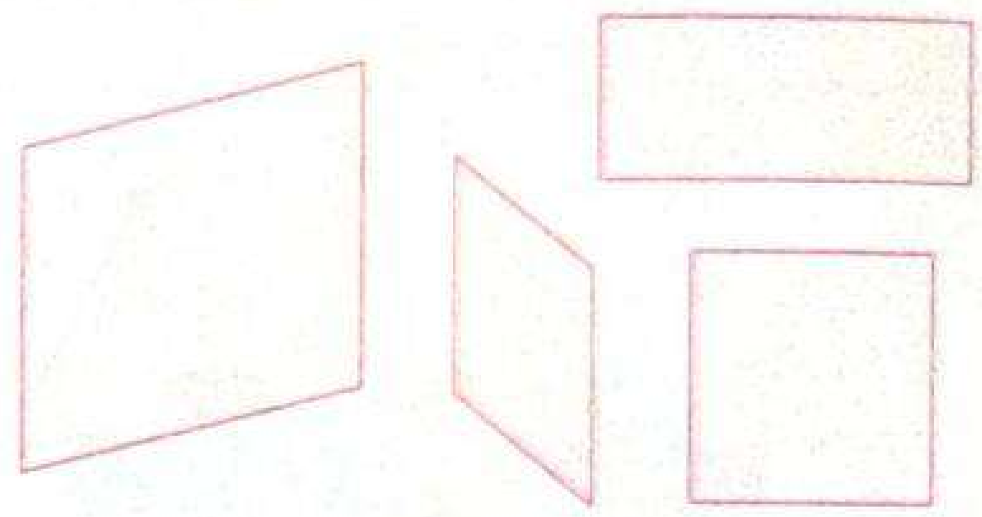
### Examples for quadrilaterals



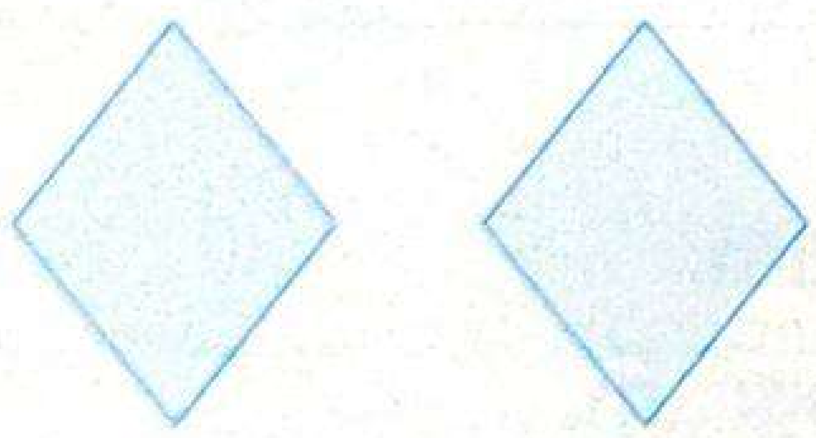
**Square**
- 2 pairs of parallel sides
- 4 equal sides
- 4 vertices



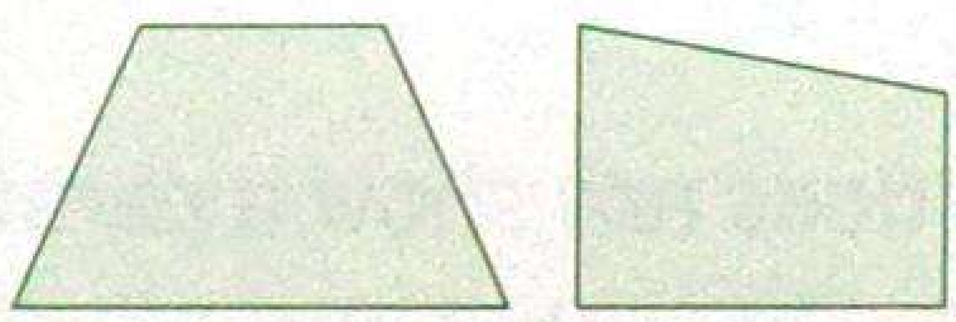
**Rectangle**
- 2 pairs of parallel sides
- 2 pairs of equal sides
- 4 vertices



**Parallelogram**
- 2 pairs of parallel sides
- 2 pairs of equal sides
- 4 vertices



**Rhombus**
- 2 pairs of parallel sides
- 4 equal sides
- 4 vertices



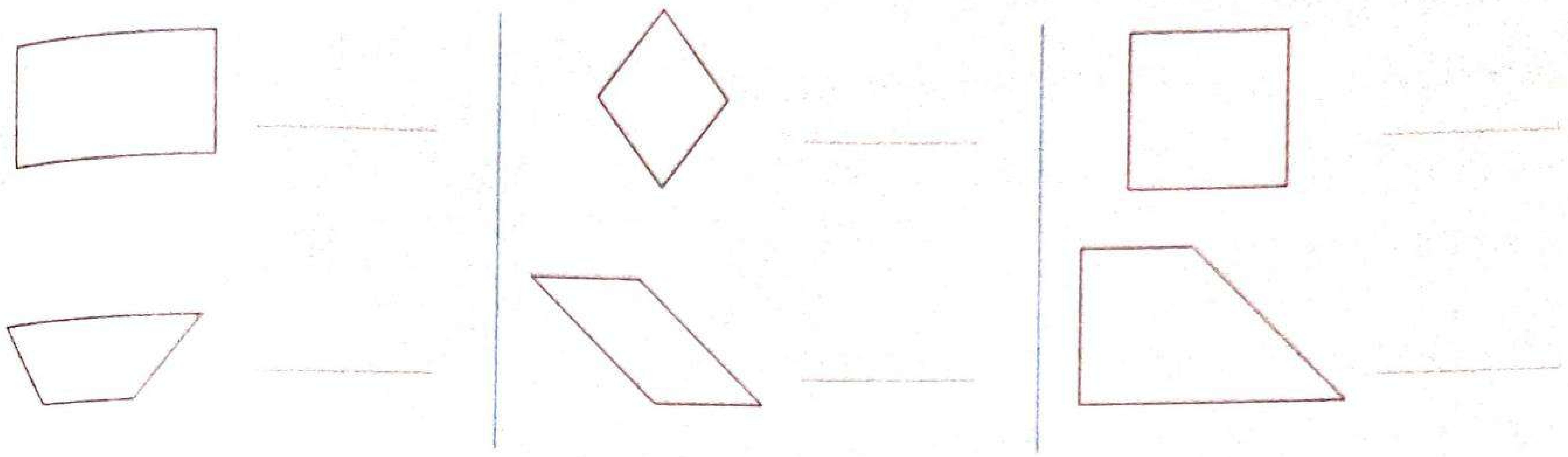
**Trapezium**
- exactly 1 pair of parallel sides
- lengths of sides may not be the same
- 4 vertices




### Quadrilateral has :
- 4 sides
- 4 vertices

## Check

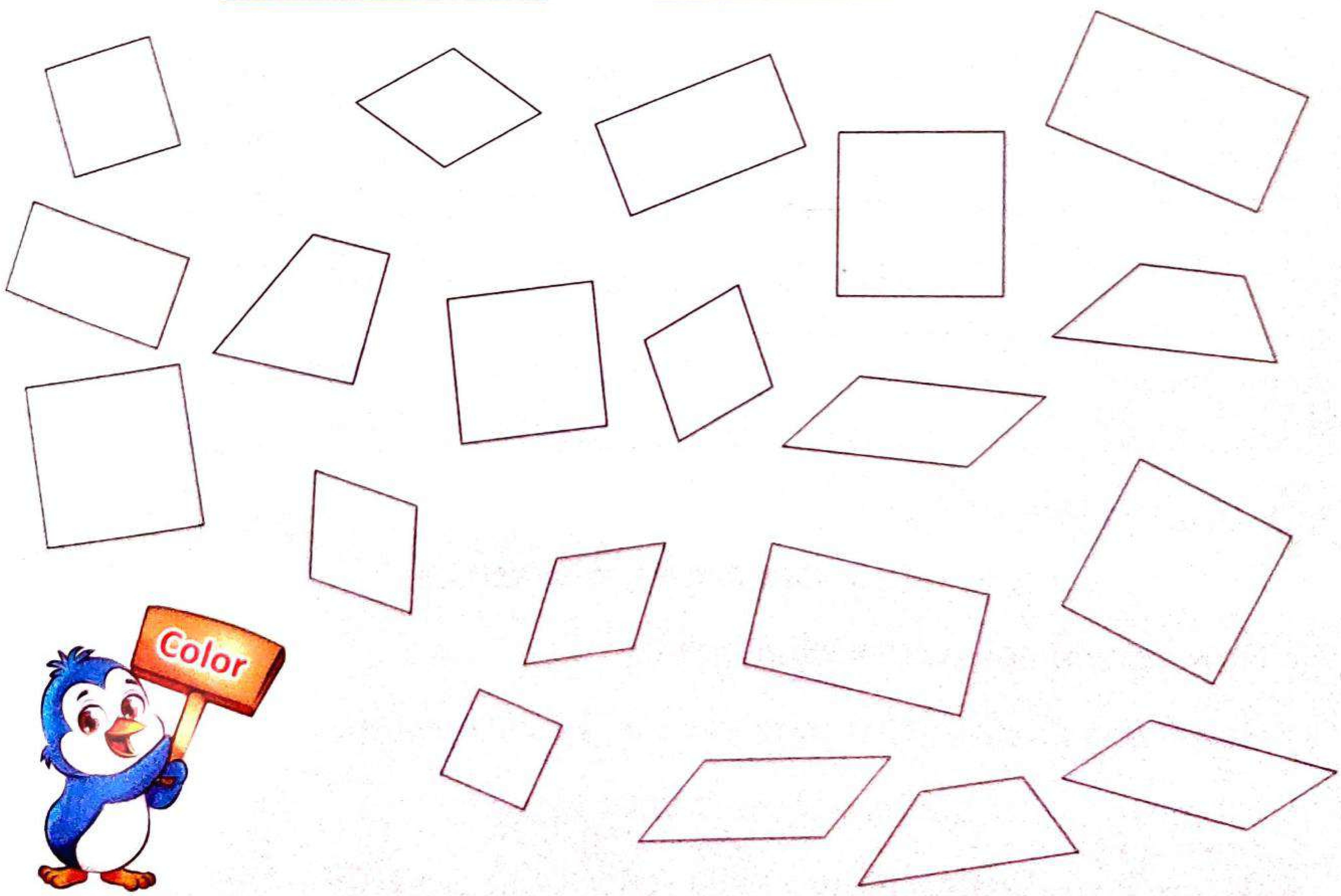
Write a name for each quadrilateral.



## Practice

Color the quadrilateral using the codes.

| Square = red | Rhombus = green | Parallelogram = yellow |
|---|---|---|
| Rectangle = blue | Trapezium = orange | |



## Learn Quadrilateral Venn diagrams

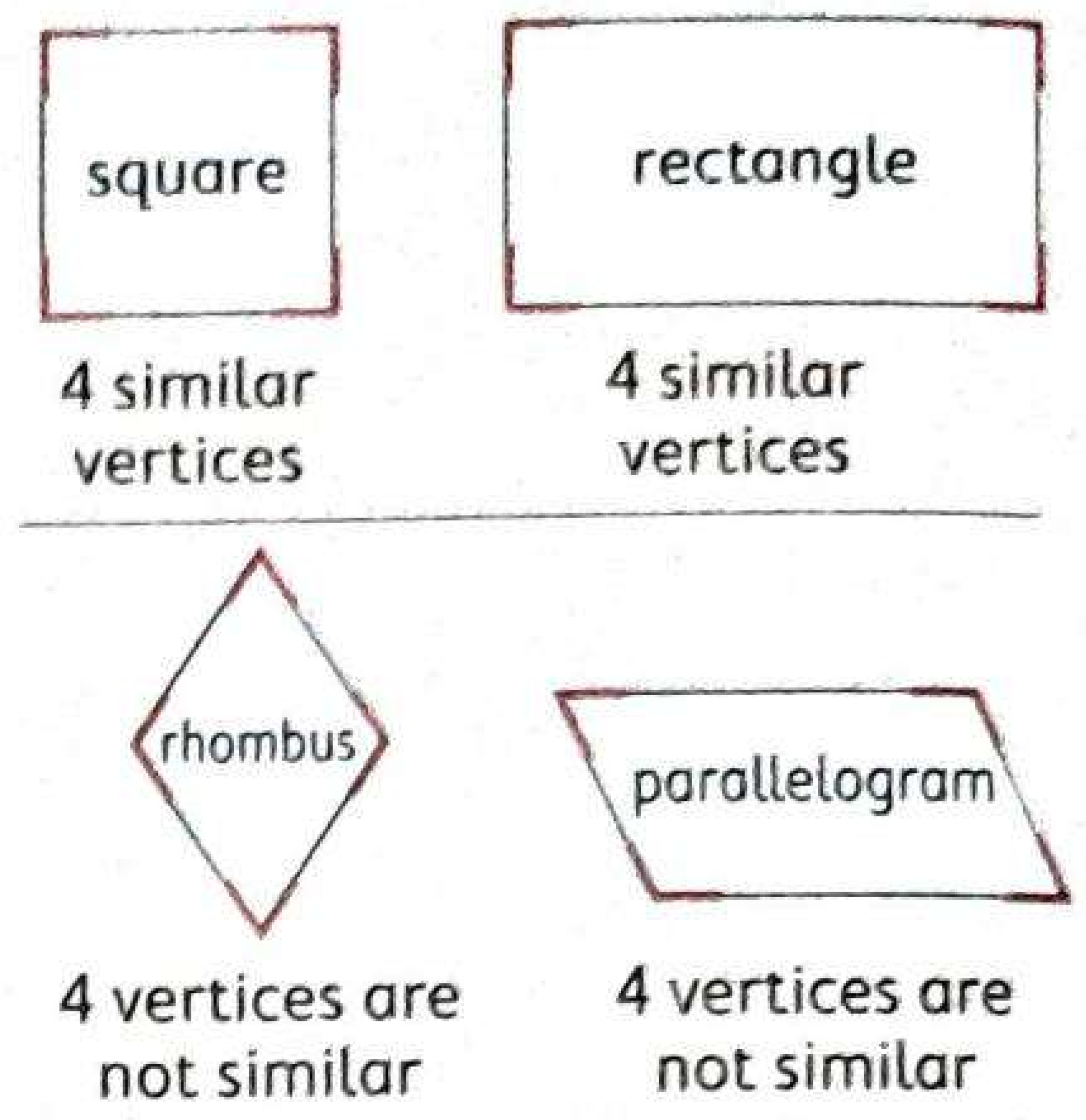
*Vocabulary*

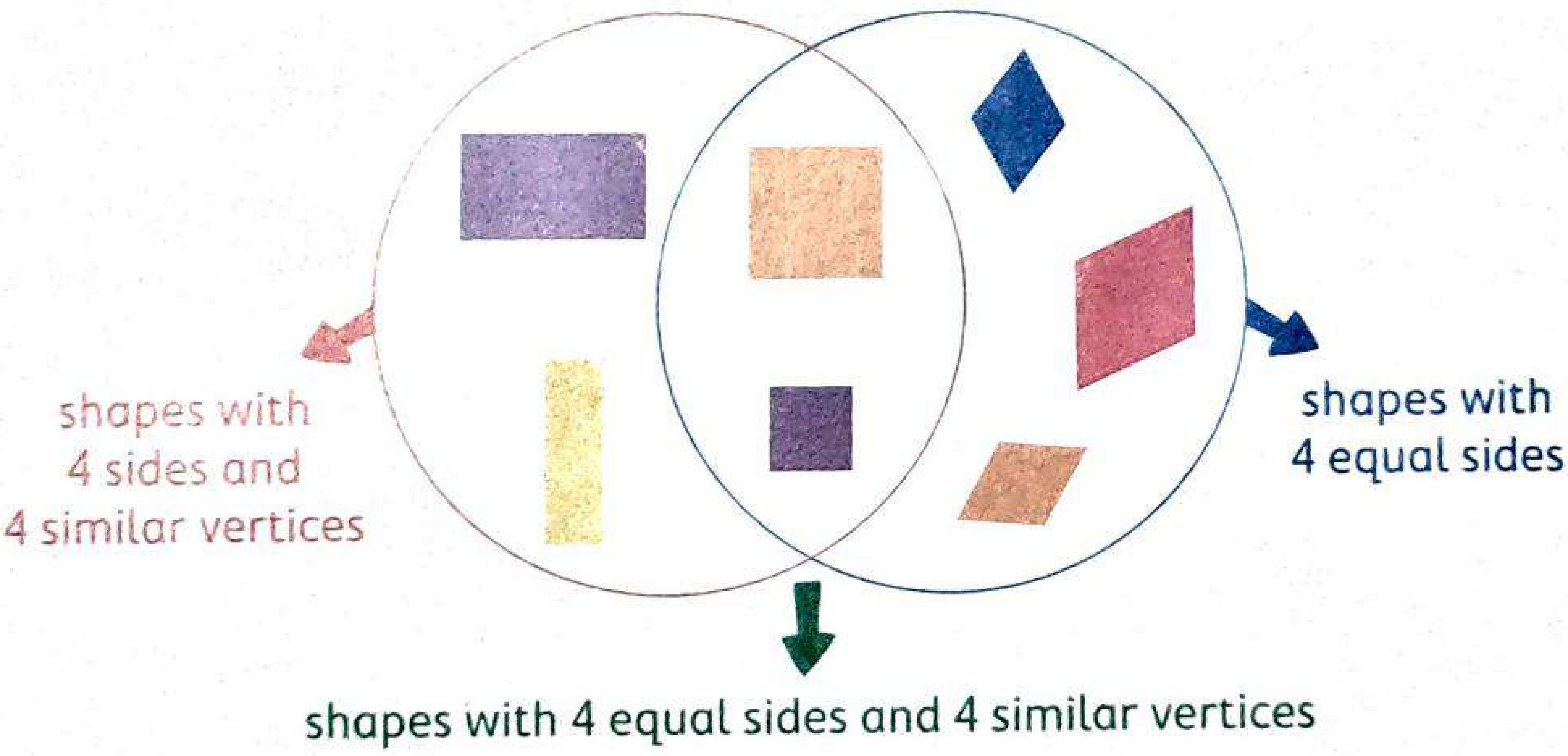
*Venn diagram*
*A Venn diagram shows how sets of things are related.*

Look at the Venn diagram below. Red circle shows shapes that have 4 sides and 4 similar vertices. Blue circle shows shapes that have 4 equal sides.

The intersection area shows shapes that have 4 equal sides and 4 similar vertices.

**Notes**




## Check

**Use the Venn diagram to answer.**

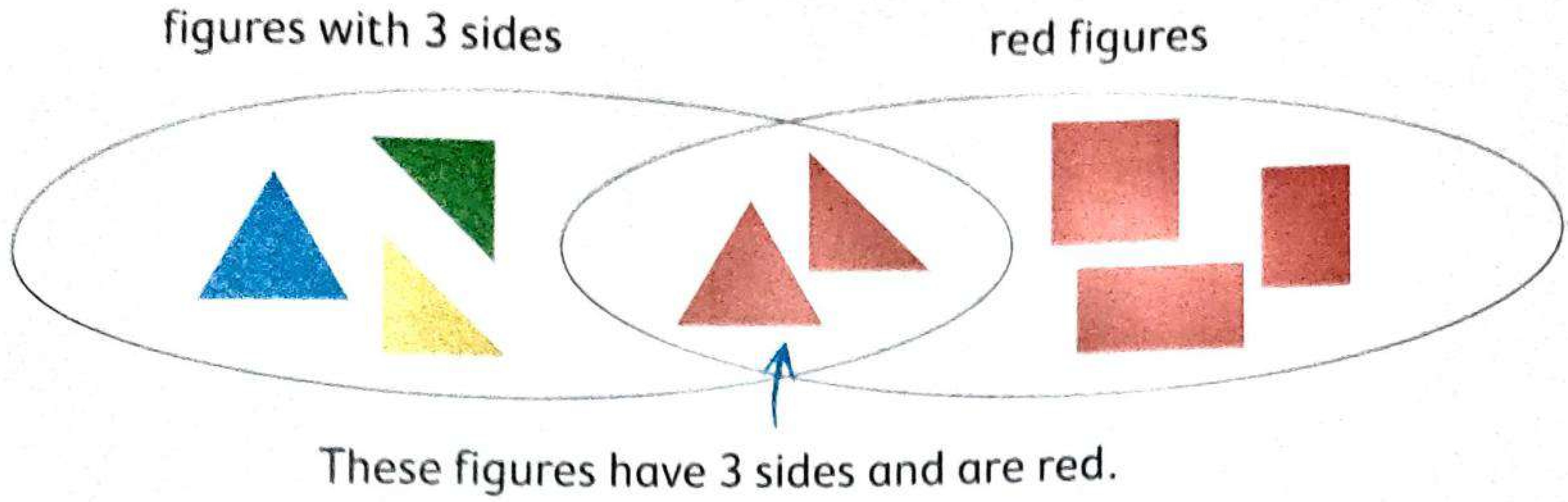
- How many shapes with 4 sides and 4 similar vertices ? ________
- How many shapes with 4 equal sides ? ________
- How many shapes with 4 equal sides and 4 similar vertices ? ________
- What types of quadrilateral are in both circles ? ________ , ________ , ________
- Where in the Venn diagram would you put this shape ■ ?

**Notes for parents**

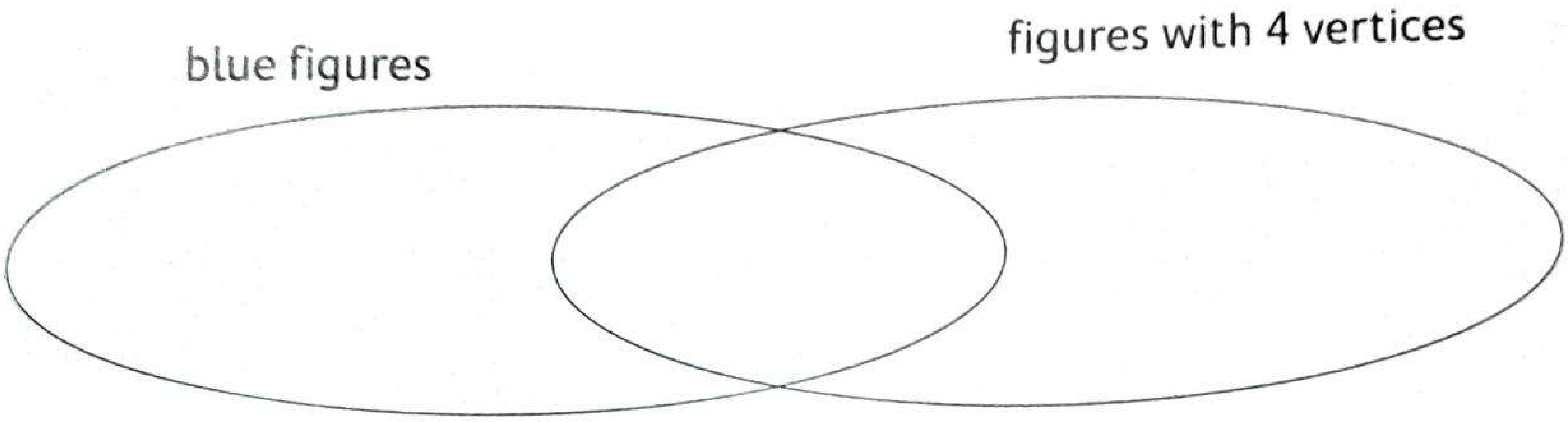
- Let your child know that Venn diagram is a way of sorting things and used in many ways and many figures.

## Practice

Sort figures in a Venn diagram.




**Draw the figures where they belong from the following.**

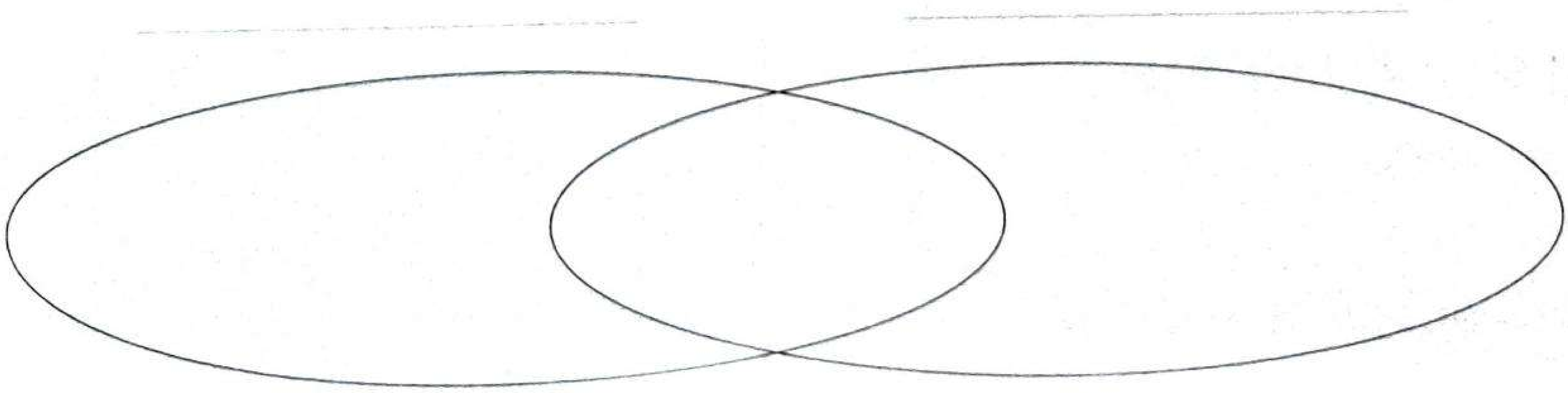


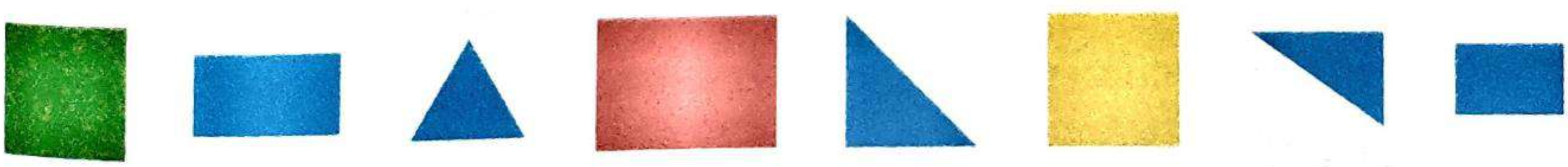



**Try Your Own**

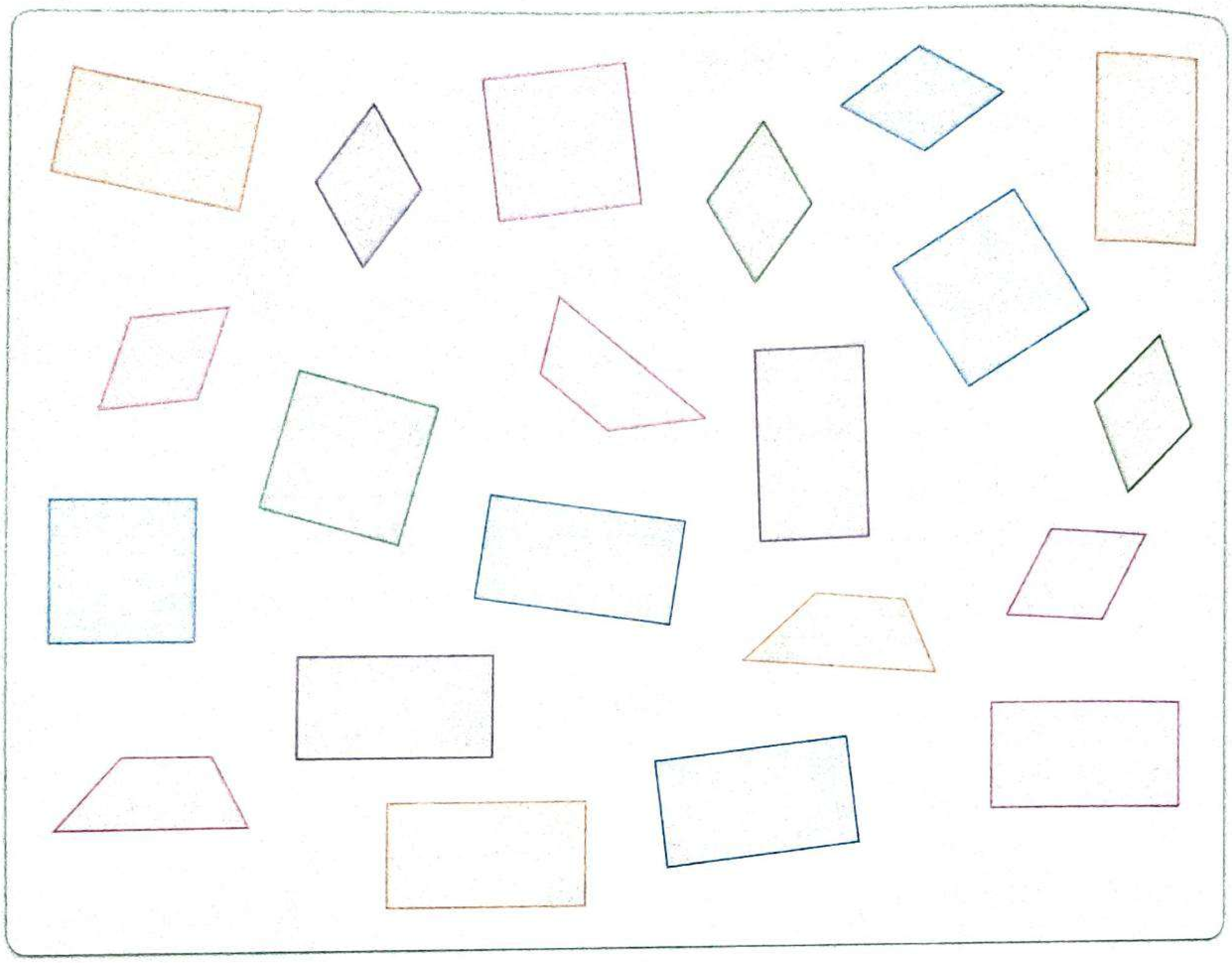
Decide how to sort the figures. Label the sections.

Draw the figures where they belong.





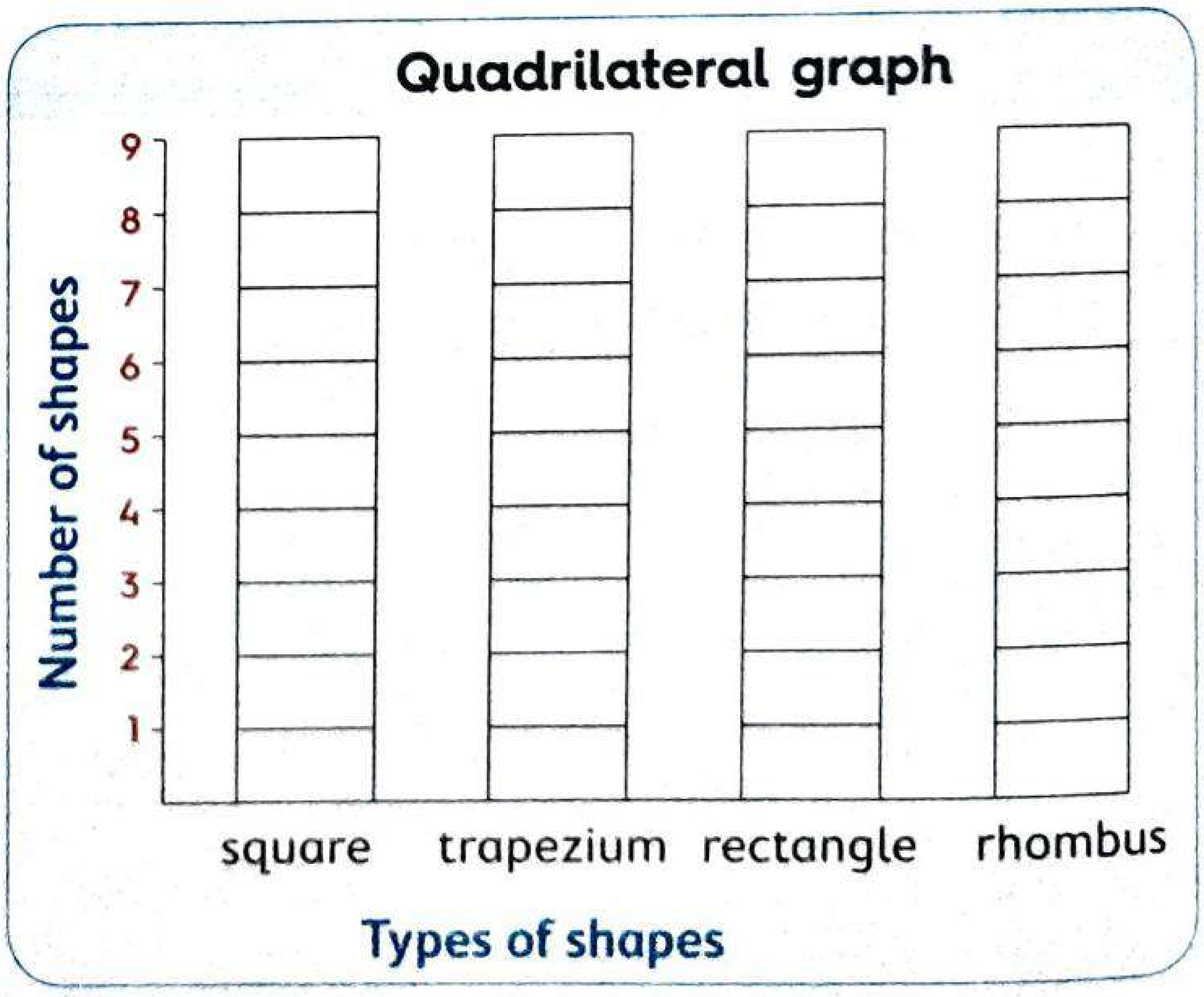
Use the following figures to fill in the bar graph below.



From the graph :

- Which quadrilateral is the most ? ____________
- Which quadrilateral is the least ? ____________
- How many parallelograms ?

____________



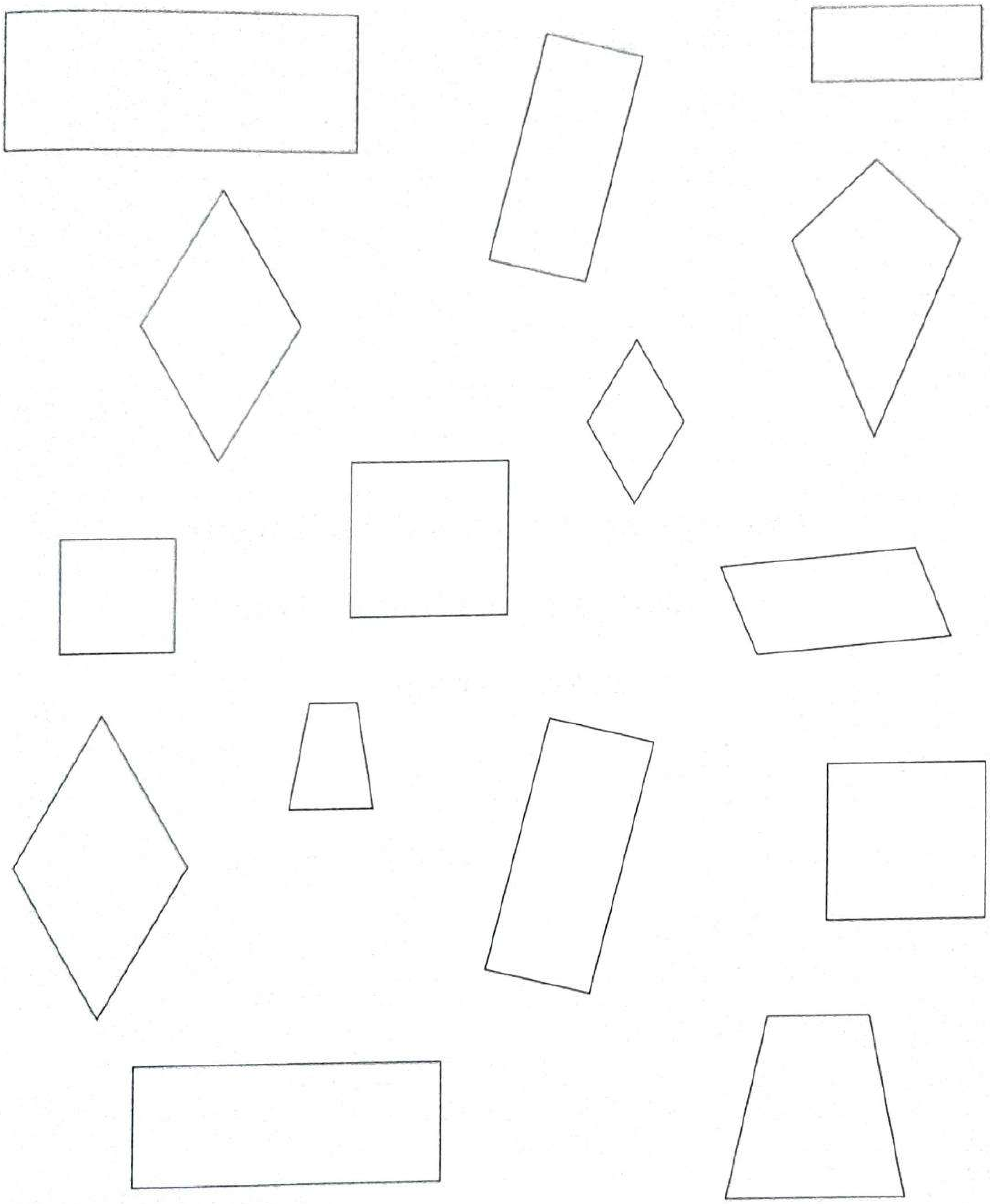

**Notes for parents**

- Ask your child to remember that squares, rectangles and rhombuses are examples for parallelogram.

# Activity

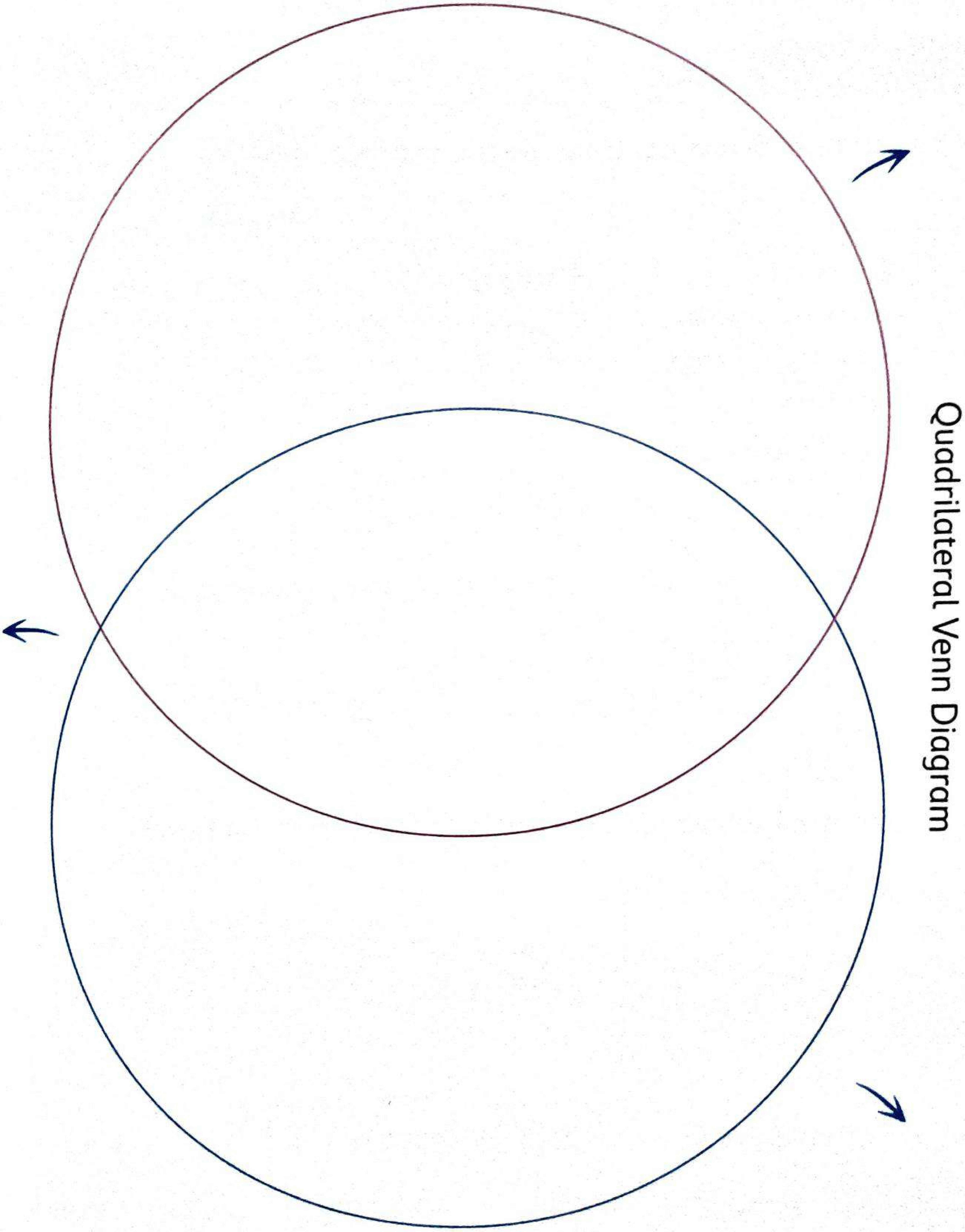


Tear out this page and cut out the quadrilaterals. Sort them and glue them onto the Venn diagram in page 183.



**Hint :** If the shape do not fit into either circle or the intersection area, put it outside the Venn diagram.

Using the previous quadrilaterals, cut out the shapes and place them where they belong on the Venn diagram below. **Label each circle and the intersection area.**



# Lessons 34 & 35

# Area

## Learn  Area

- You can count or multiply square units to find area.



> *Vocabulary*
>
> *Area* is the number of square units needed to cover the surface of a figure.
>
> *A square unit* is a square with a side length of 1 unit and it is the unit used to measure area.

### Count units

To find area of a rectangle, count the squares inside the rectangle.

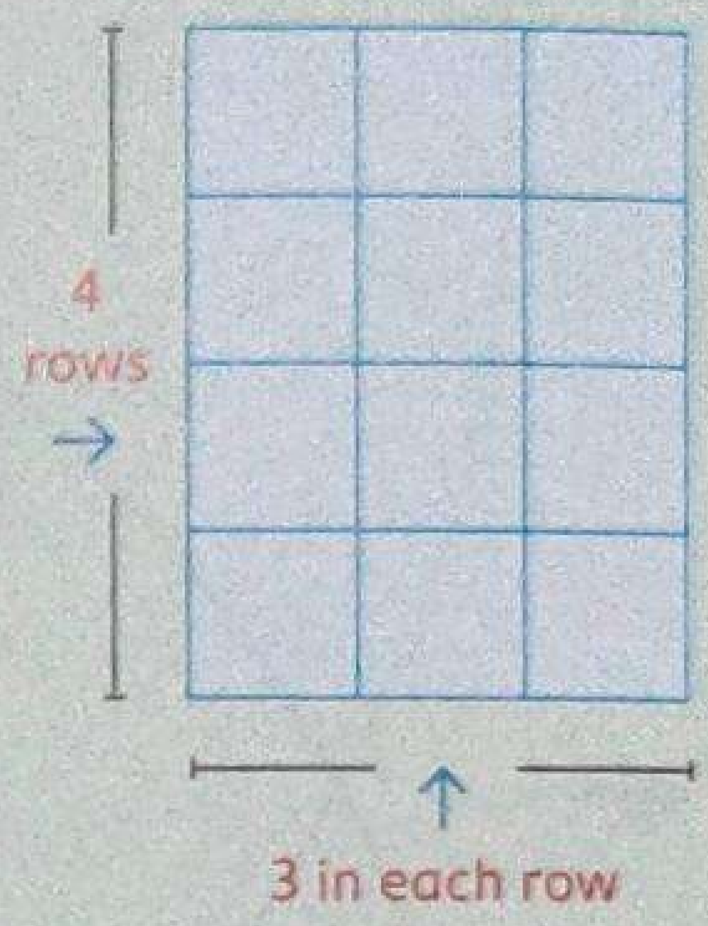
Area = 12 square units

| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 |
| 7 | 8 | 9 |
| 10 | 11 | 12 |

### Multiply units

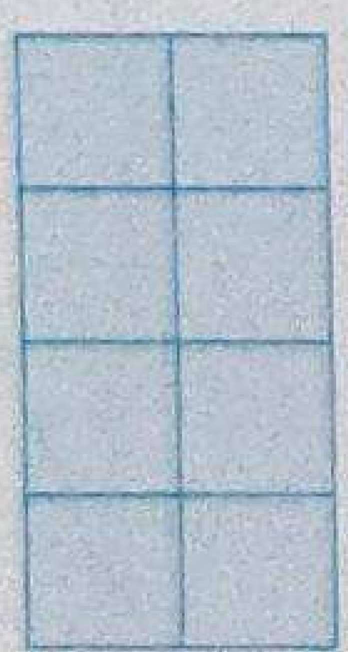
To find area of rectangle, multiply the number of rows by the number in each row.

number of rows → 4 × 3 ← number in each row = 12 square units ← area




## Check

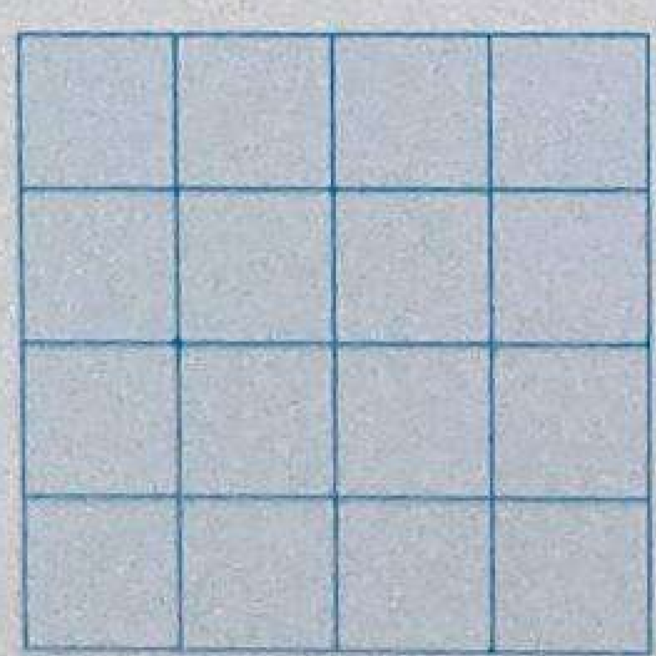
How many square units were used to make these figures ?



_____ rows

_____ in each row

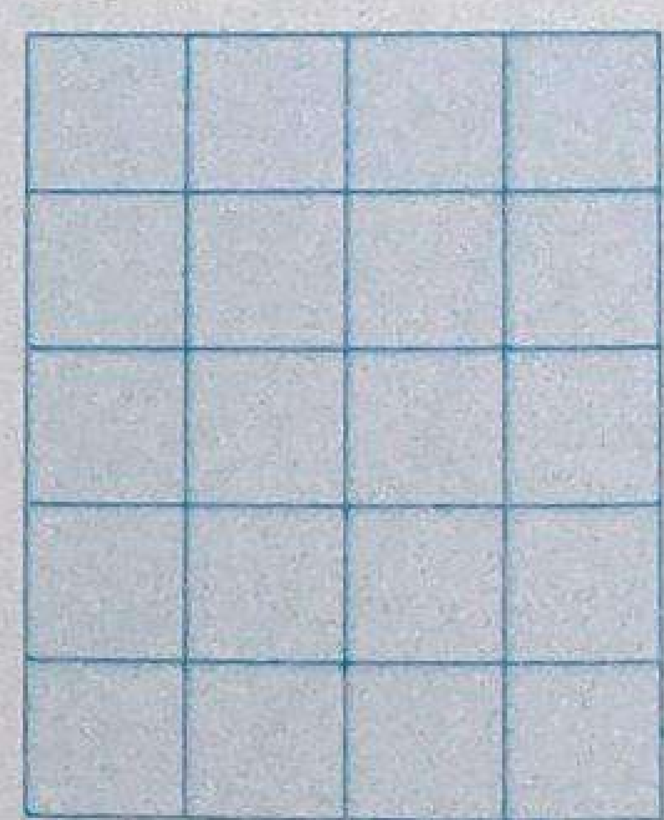
Area = ☐ square units



_____ rows

_____ in each row

Area = ☐ square units



_____ rows

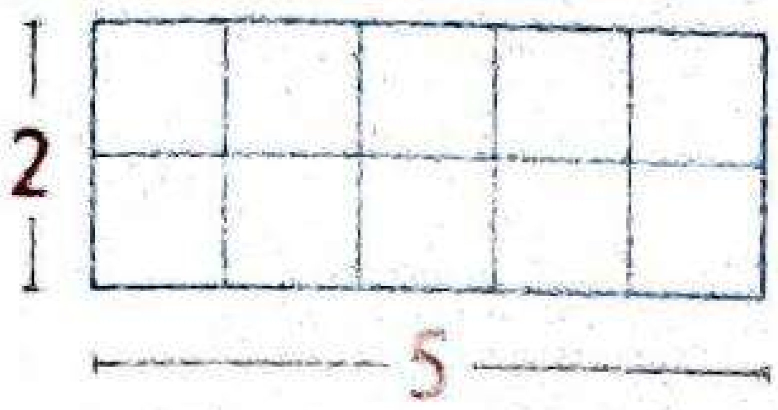
_____ in each row

Area = ☐ square units

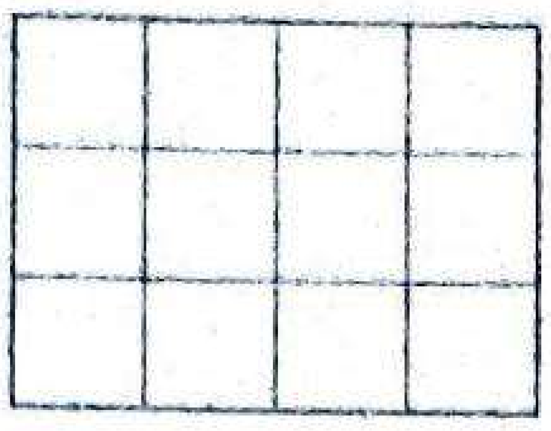
## Practice

**Remember**
□ = 1 square unit

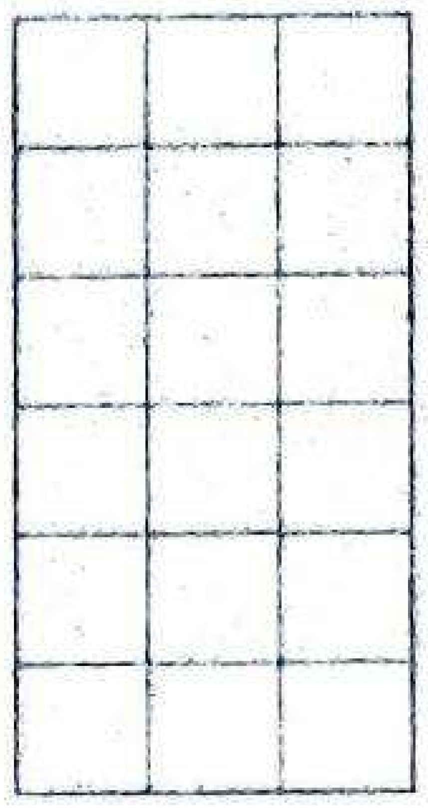
Count or multiply to find the area of each of the following figures.



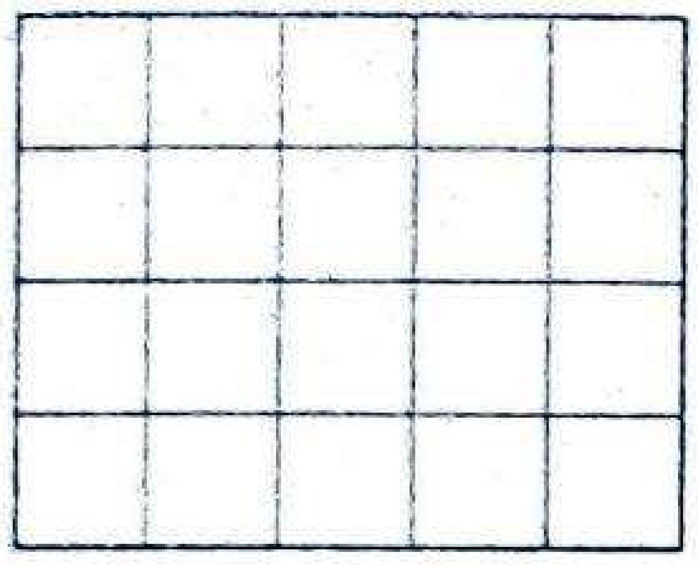

Area = 2 × 5
= 10 □



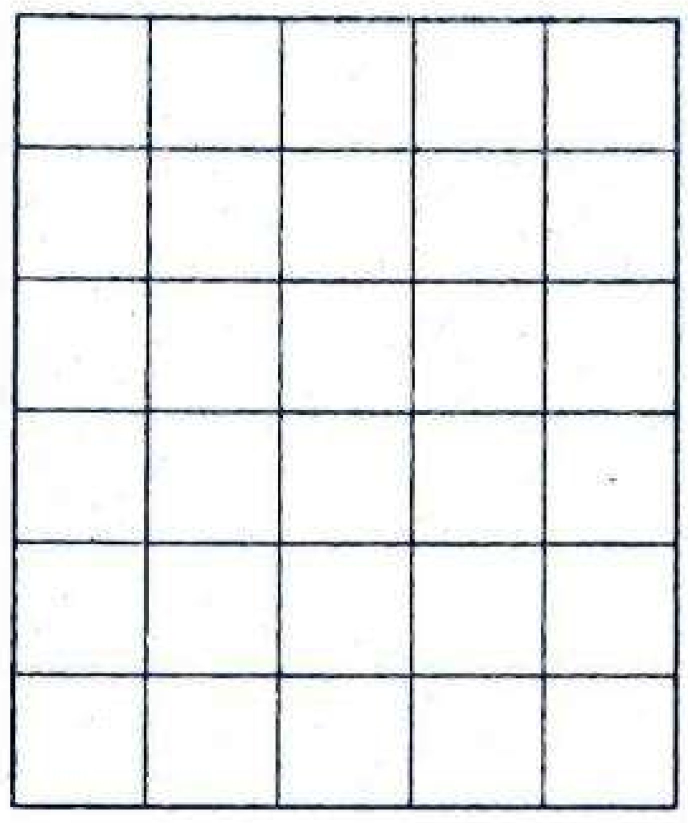
Area = ____ × ____
= ____ □



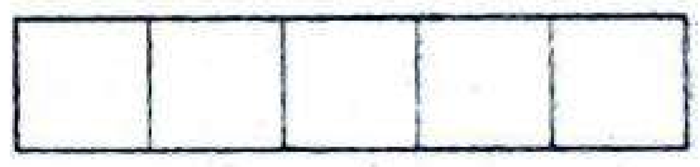
Area = ____ × ____
= ____ □



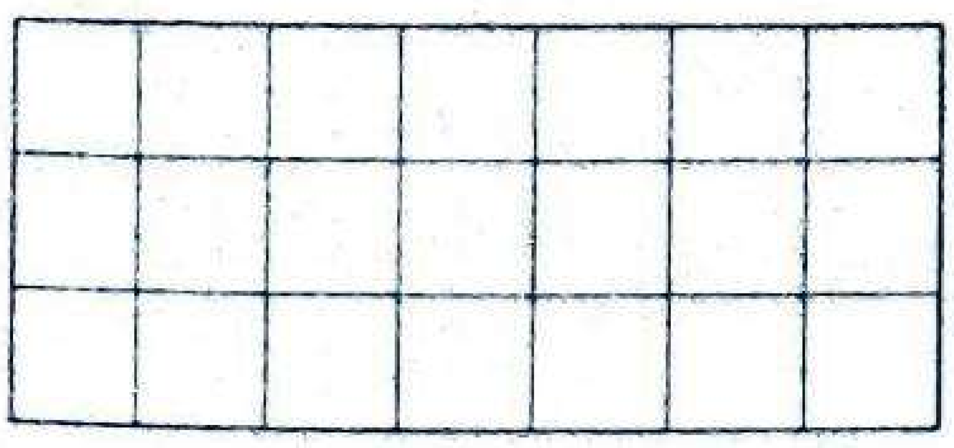
Area = ____ × ____
= ____ □



Area = ____ × ____
= ____ □



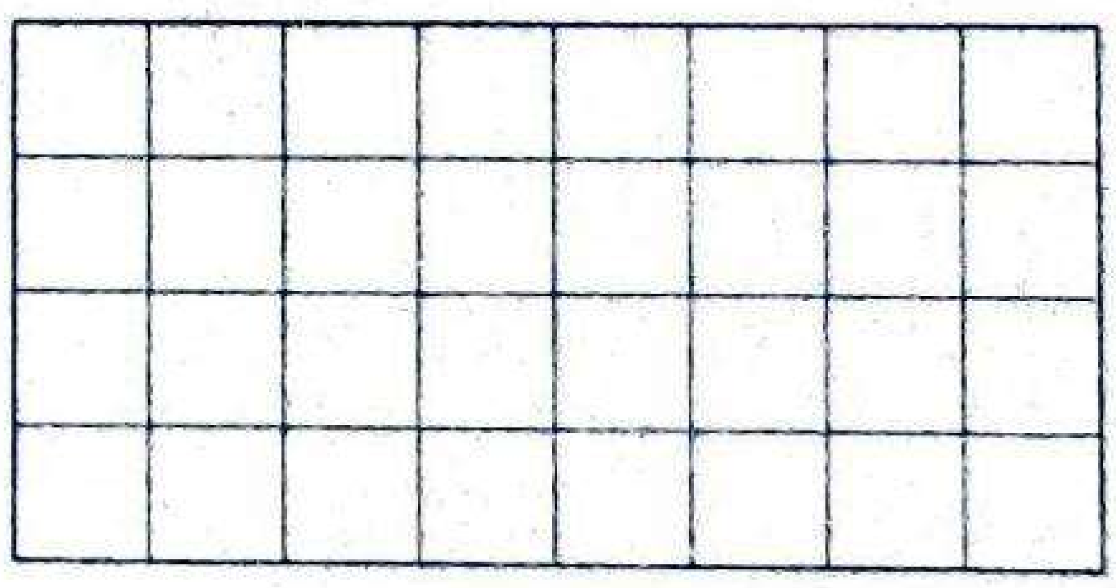
Area = ____ × ____
= ____ □



Area = ____ × ____
= ____ □



Area = ____ × ____
= ____ □



Area = ____ × ____
= ____ □

Use grid to draw a rectangle represents each of the following sentences and calculate the area.

$3 \times 5 =$ 15 ☐

$2 \times 7 =$ ___ ☐

$4 \times 5 =$ ___ ☐

$4 \times 2 =$ ___ ☐

$8 \times 3 =$ ___ ☐

$6 \times 1 =$ ___ ☐

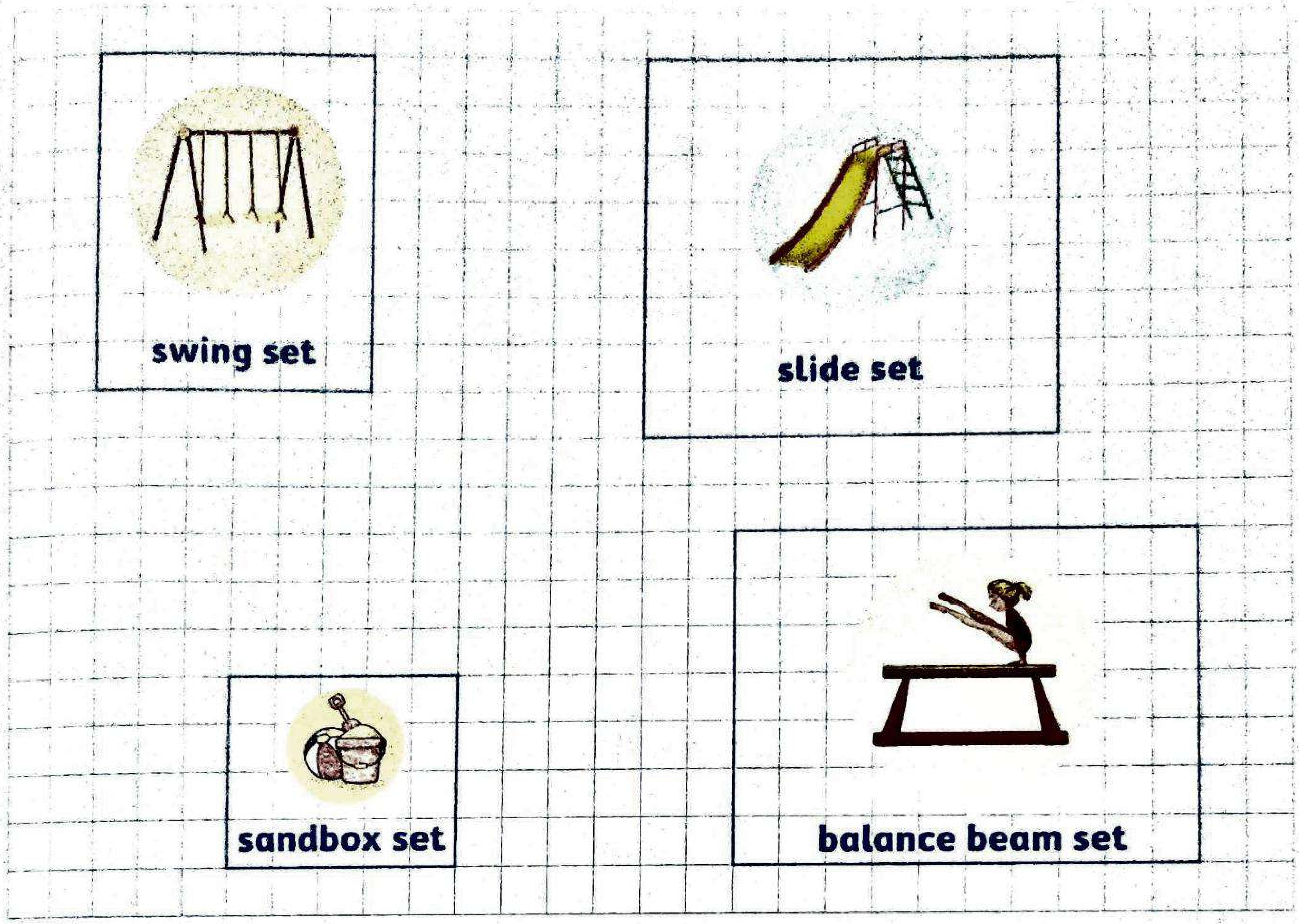
$4 \times 7 =$ ___ ☐

$4 \times 9 =$ ___ ☐

**Notes for parents**

- Ask your child to draw a rectangle of 6 rows with 3 square units in each row and calculate the area of the rectangle.

Here are some things were placed in your playground. Complete the following.




- The area of swing set = ________ × ________ = ________ square units.
- The area of slide set = ________ × ________ = ________ square units.
- The area of sandbox set = ________ × ________ = ________ square units.
- The area of balance beam set = ________ × ________ = ________ square units.

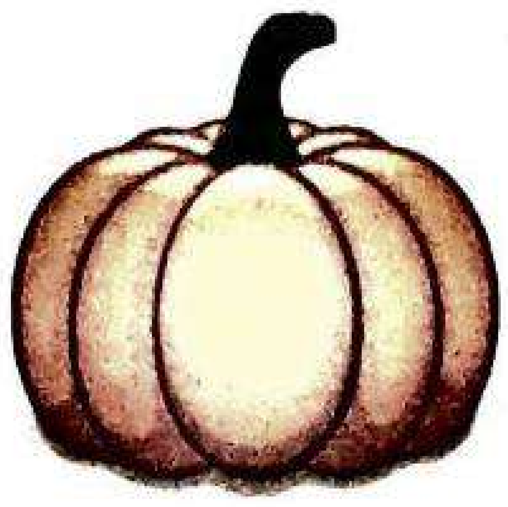
## Challenge

- Calculate the area of slide set and sandbox set.

______________________________________________

**Use the grids to solve the following.**

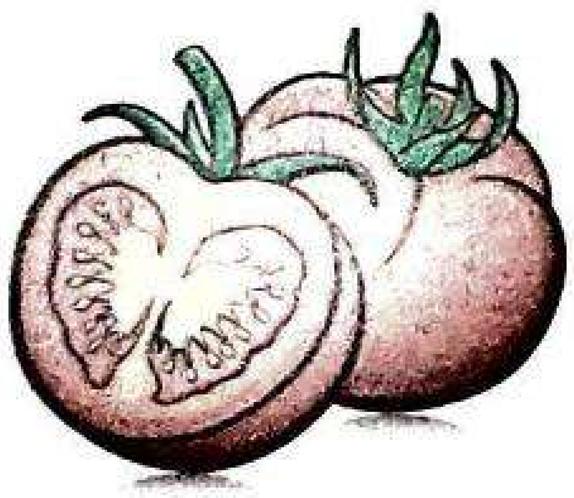
- Sara is planting pumpkin. Each pumpkin needs 1 square unit of space. She would like the garden to have 4 rows with 2 square units in each row. How many pumpkin can she fit ?



What is the area of her garden in square units ?

_______________________________

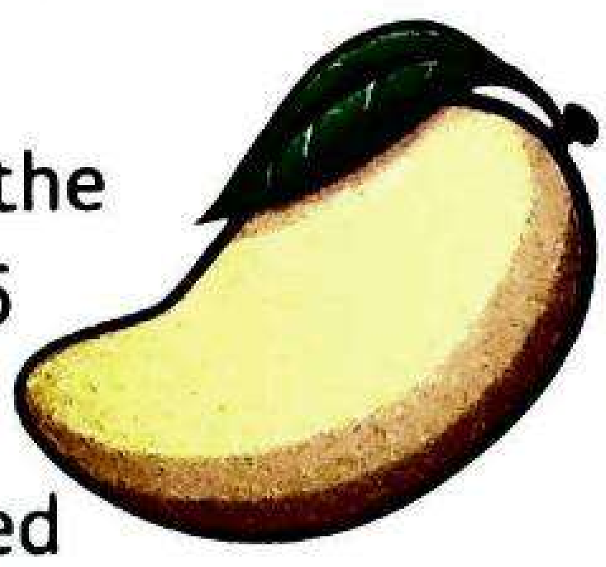
- Bassem is planting tomato. Each tomato needs 1 square unit of space. He would like the garden to have 3 rows with 6 square units in each row. How many tomato can he fit ?



What is the area of his garden in square units ?

_______________________________

- Ahmed wants to plant mango. Each mango needs 1 square unit of space. He would like the garden to have 5 rows with 5 square units in each row. How many mango can Ahmed plant in his garden ?



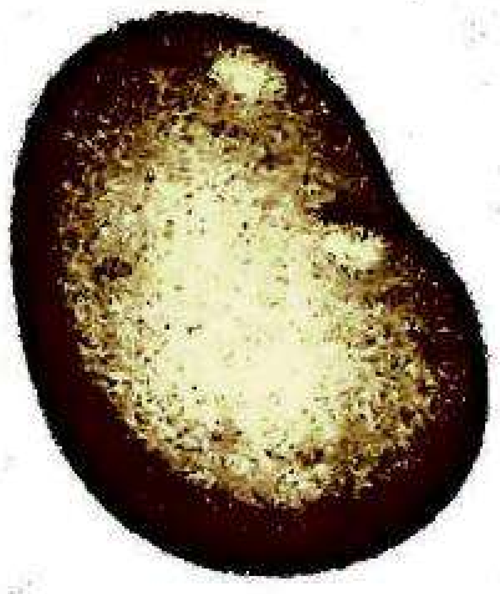
What is the area of his garden in square units ?

_______________________________

**Notes for parents**

- Ask your child to calculate the total area if Sara, Bassem and Ahmed all put their gardens together.

- Amal loves potato and wants to plant it in her garden. Each potato needs 1 square unit of space. She would like the garden to have 8 rows with 6 square units in each row.



How many can Amal fit in her garden ?

What is the area of her garden in square units ?

_______________________________________

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- Draw a square of 6 rows and calculate the area of the square.

_______________________________________

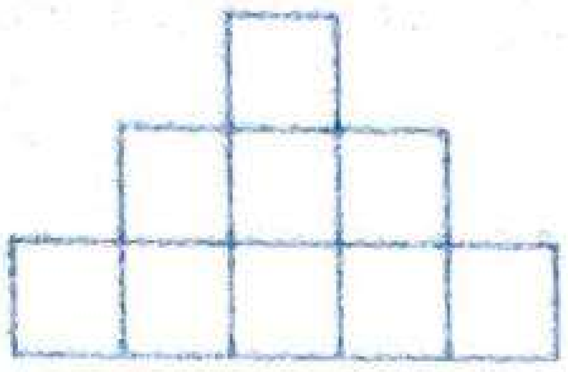
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- Draw a rectangle of 4 rows with 7 square units in each row.

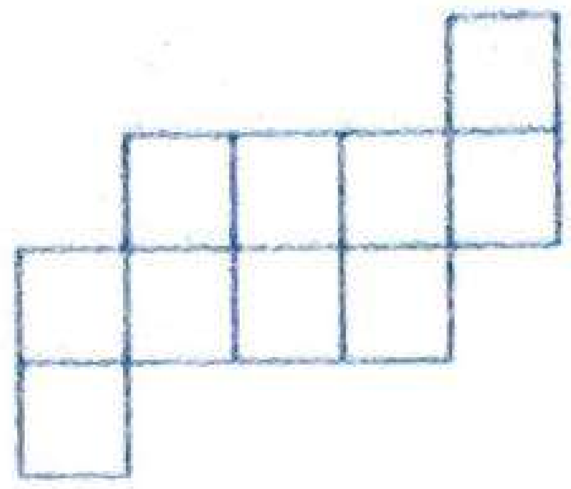
Calculate the area of the rectangle.

_______________________________________

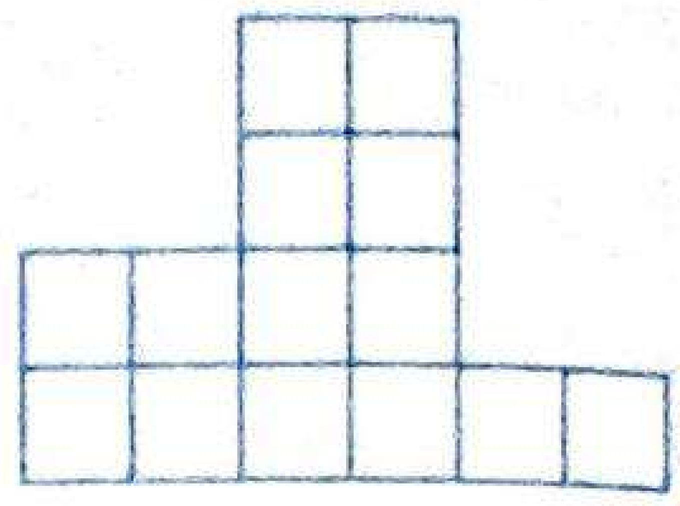
Calculate the area of each of the following.



Area = .................. ☐



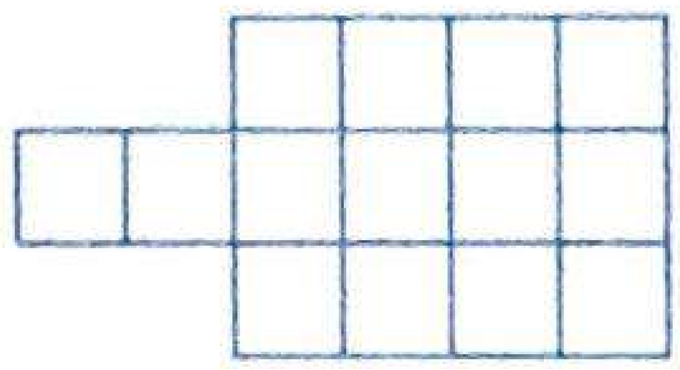
Area = .................. ☐



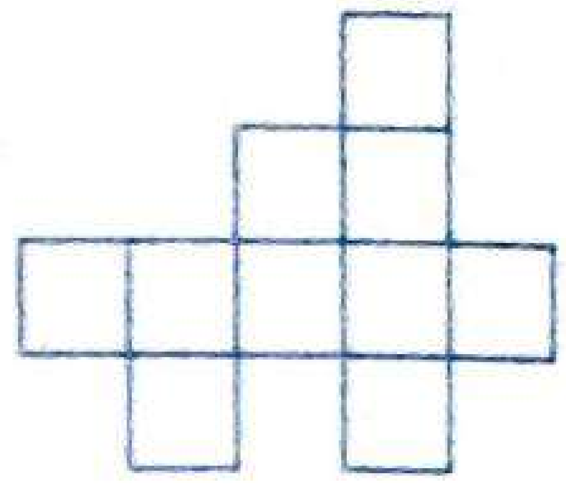
Area = .................. ☐



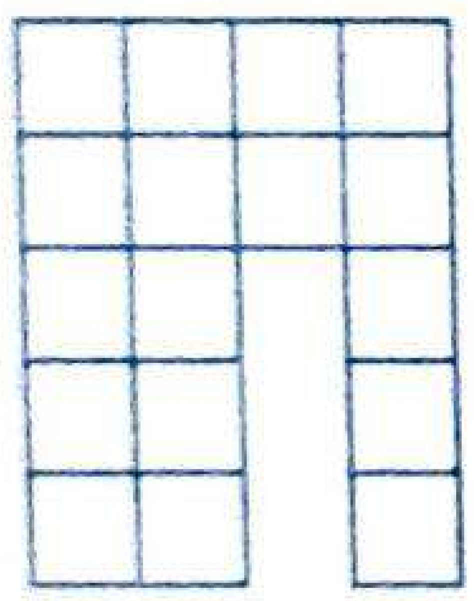
Area = .................. ☐



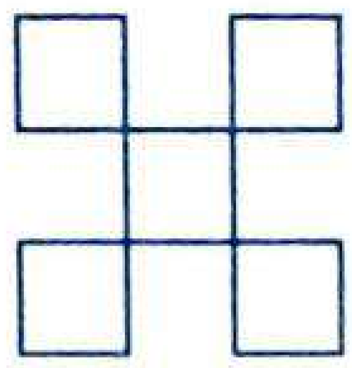
Area = .................. ☐



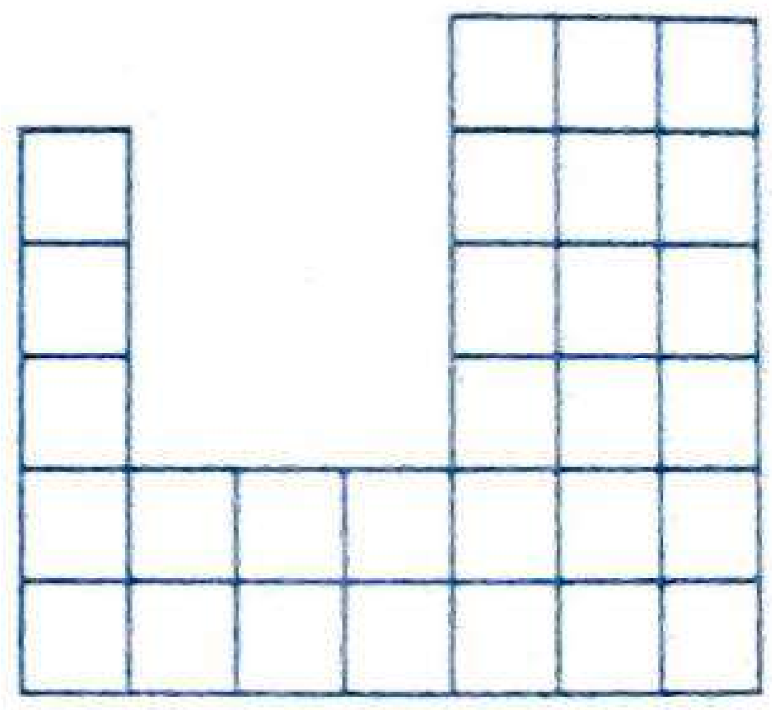
Area = .................. ☐



Area = .................. ☐



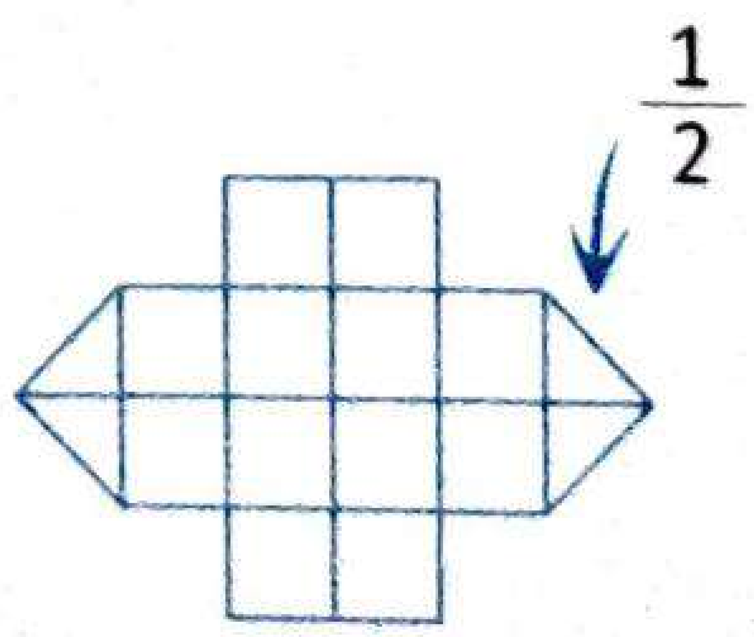
Area = .................. ☐



Area = .................. ☐

## Challenge

- Calculate the area.






**Notes for parents**

- Help your child to calculate the area of each figure using different strategies such as : divide each figure into many parts and calculate the area of each part and combine them all or count the squares one by one.

Place a smiley face

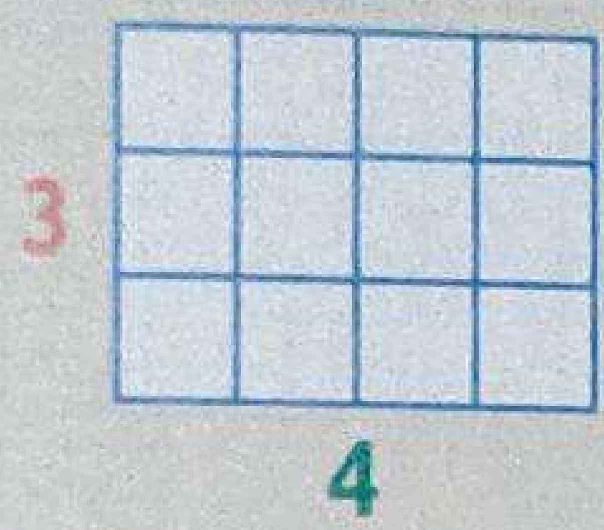
Lesson
# 36 Equal areas

## Learn — Equals areas



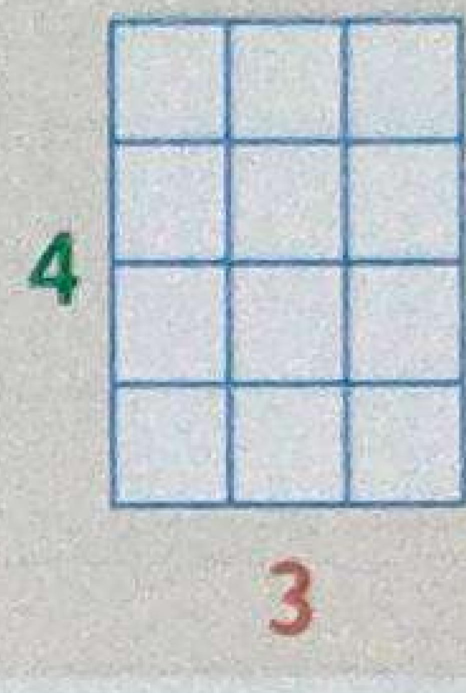

Commutative property of multiplication $3 \times 4 = 4 \times 3$

- There are more than one rectangle that look different but have the same area.



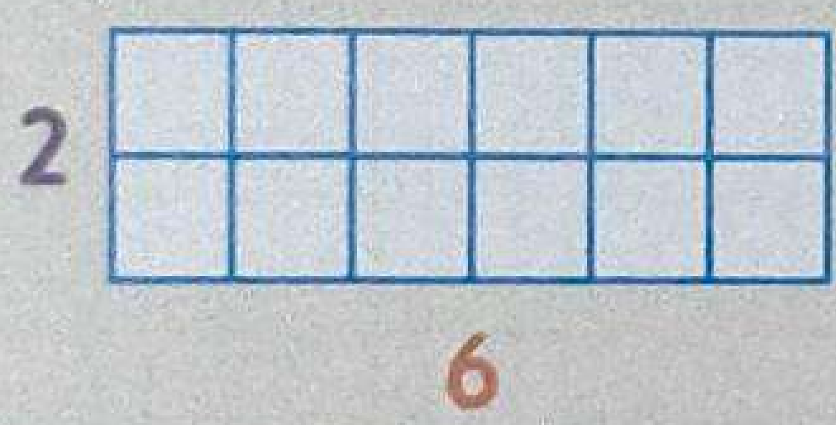
3 rows of 4

Area = $3 \times 4 =$ 12 square units



4 rows of 3

Area = $4 \times 3 =$ 12 square units

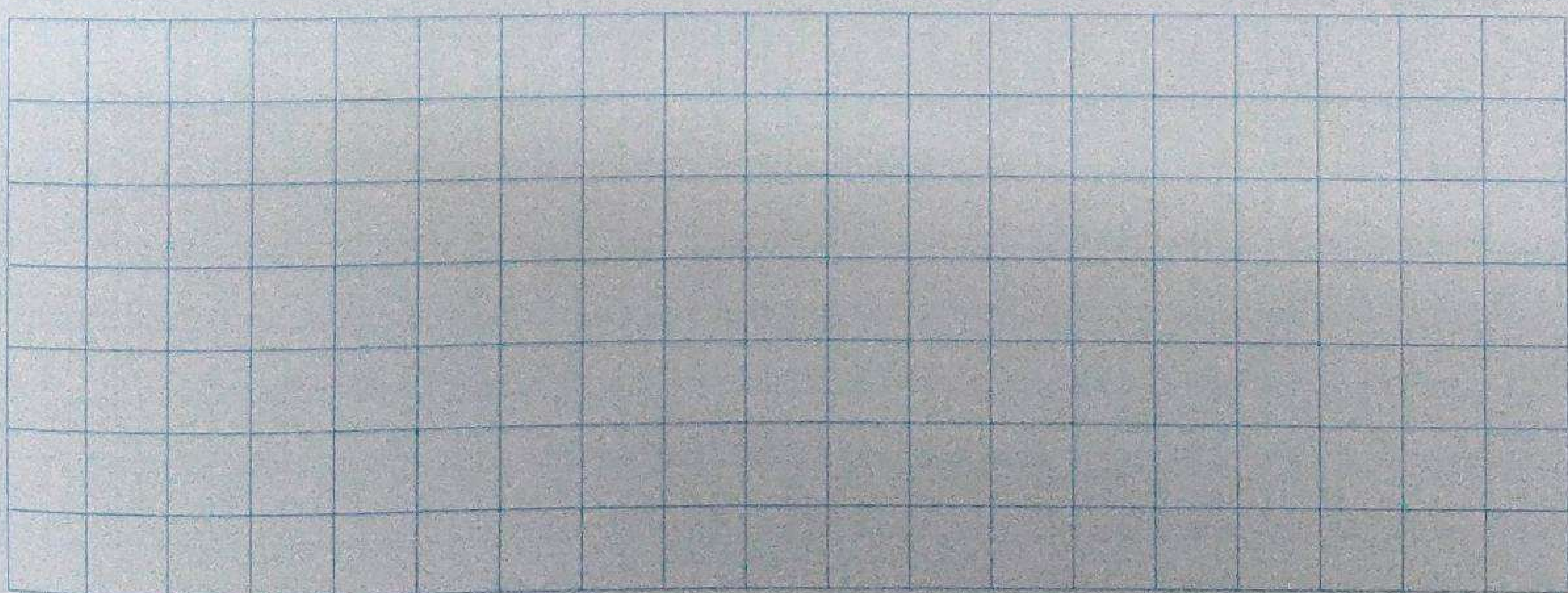


2 rows of 6

Area = $2 \times 6 =$ 12 square units

## Check

Draw more rectangles have the same area of 10 square units.



## Practice

Use commutative property to draw two different rectangles of the following dimensions. Multiply to find the area.

- 2 units , 3 units.

_______________________________________

- 3 units , 4 units.

_______________________________________

- 4 units, 5 units.

_______________________________________

**Notes for parents**



- Ask your child to draw two different rectangles with dimensions 5 units and 6 units and find their areas.

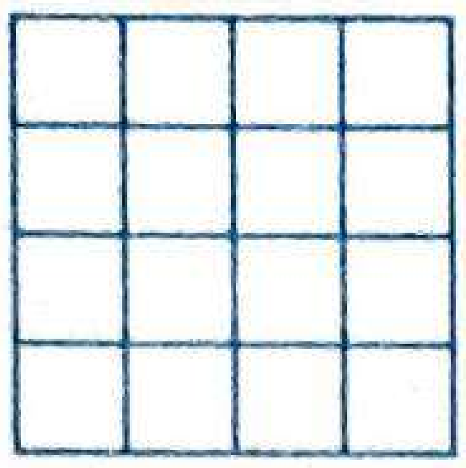
Draw on the grids rectangles with different dimensions with an area of each of the following. Write the multiplication equations for each rectangle.

- 12 square units.

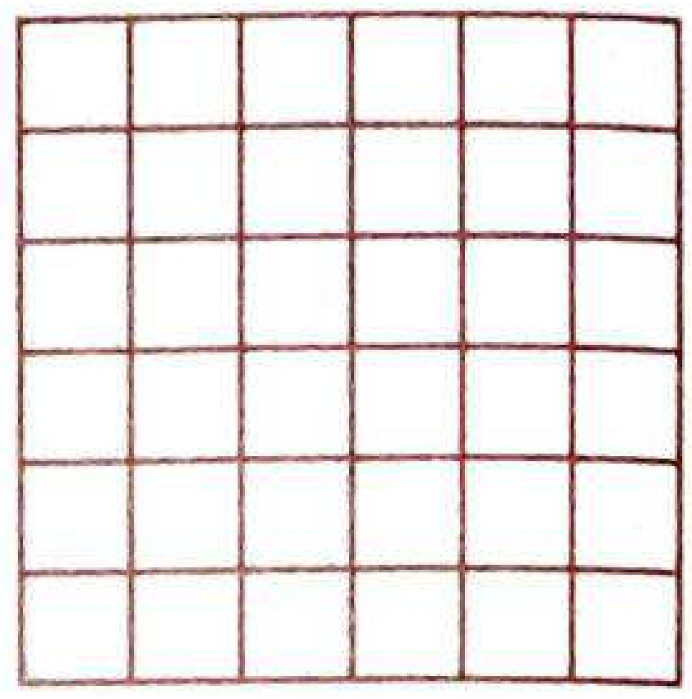
- 18 square units.

- 24 square units.

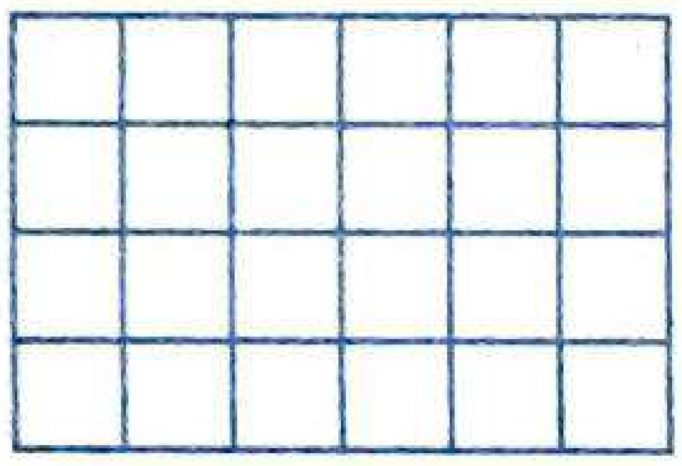
**Complete the equations under each of the following.**
**Match the equal areas.**



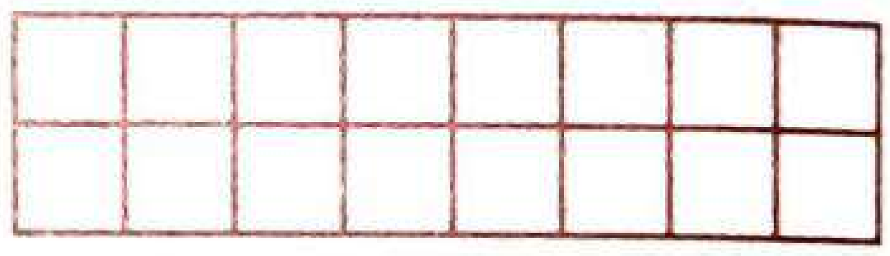
___ × ___ = ___



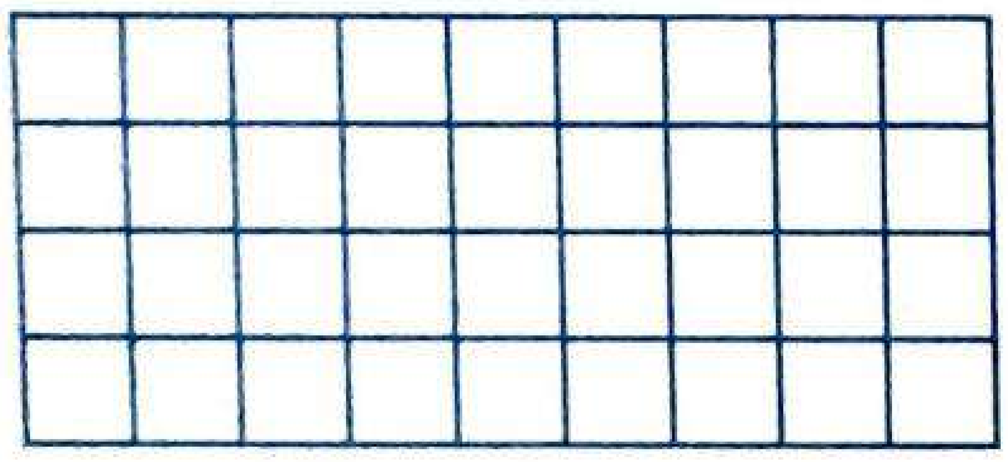
___ × ___ = ___



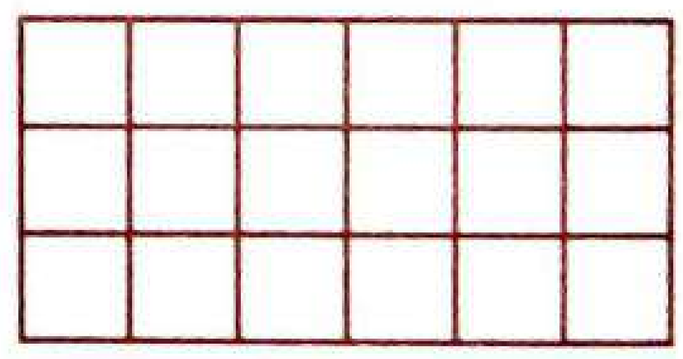
___ × ___ = ___



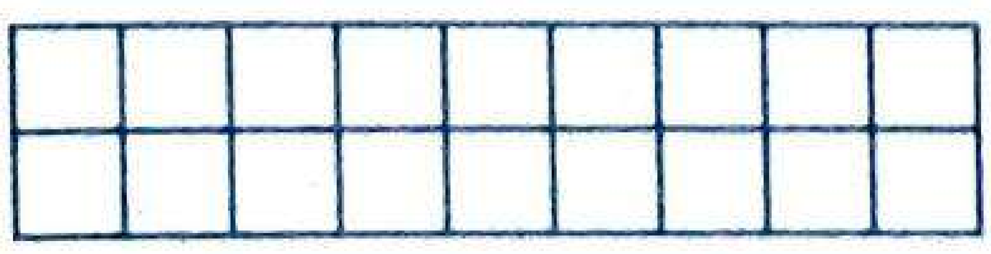
___ × ___ = ___



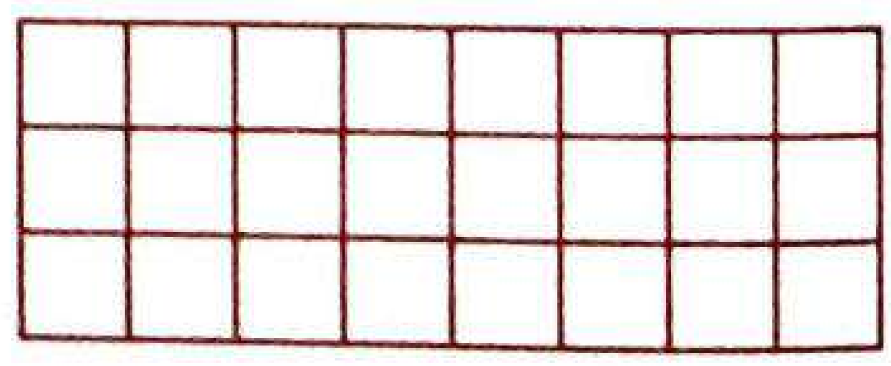
___ × ___ = ___



___ × ___ = ___



___ × ___ = ___



___ × ___ = ___

**Notes for parents**

- Ask your child to compare between the areas of the two rectangles with dimensions of "2 units and 3 units" and "1 unit and 6 units"

Bassem planted two flower plots. One was 3 × 6 and one was 2 × 9.
Do they have the same area ?

**Write the two commutative property sentences for each plot.**

---

Amira wanted to plant 24 flowers. If one flower needs 1 square unit.
Show two ways for the area of 24 square units.

**Write the two commutative property sentences for each.**

Answers may vary !

Let your child know that we use the dimensions of any shape to calculate its area.

Place a smiley face

Lesson

# 37 Area using dimensions

## Learn — Area using dimensions

*Vocabulary*

*Dimensions are calculated by the number of rows and the number of columns of the rectangle.*

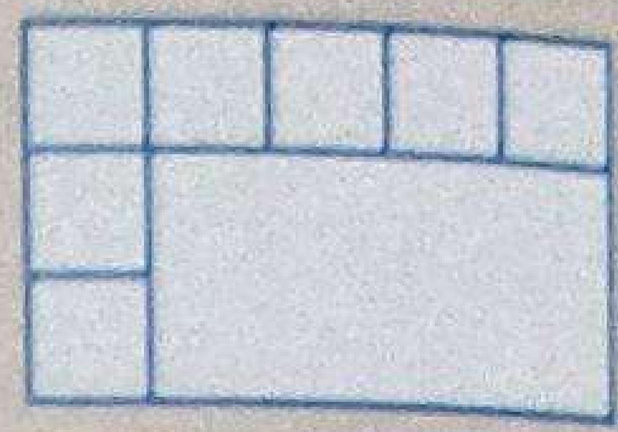
- To calculate the area of a rectangle or a square, you can use the **dimensions** of the figure.

For example :

Area of the rectangle = 3 × 5 = 15 square units

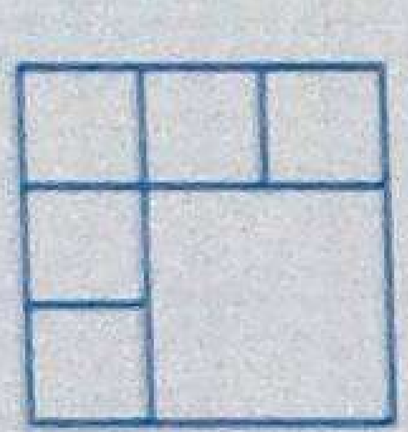
5 columns

3 rows

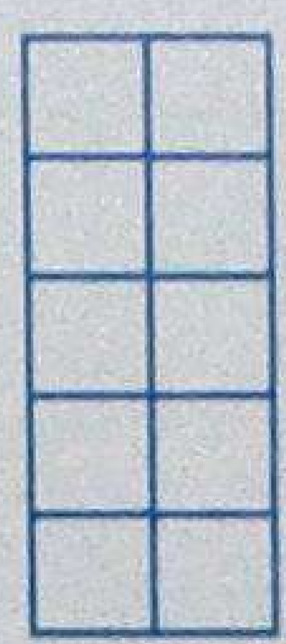


## Check

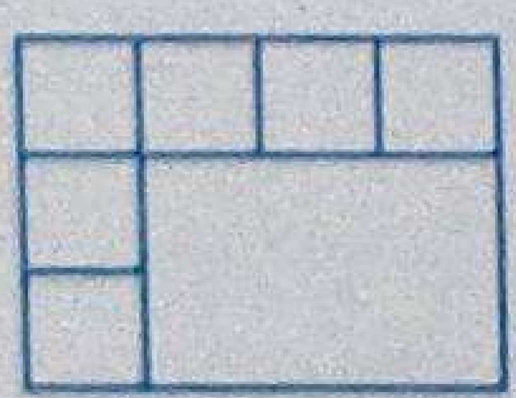
Determine the dimensions of each figure. Calculate the area of each figure.



Area = ___ × ___
= ___ square units



Area = ___ × ___
= ___ square units



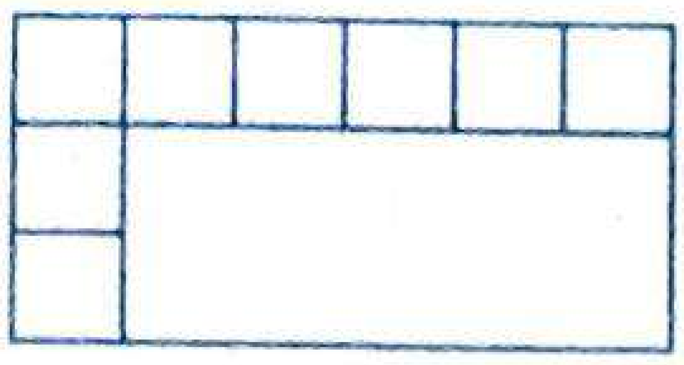
Area = ___ × ___
= ___ square units



Area = ___ × ___
= ___ square units

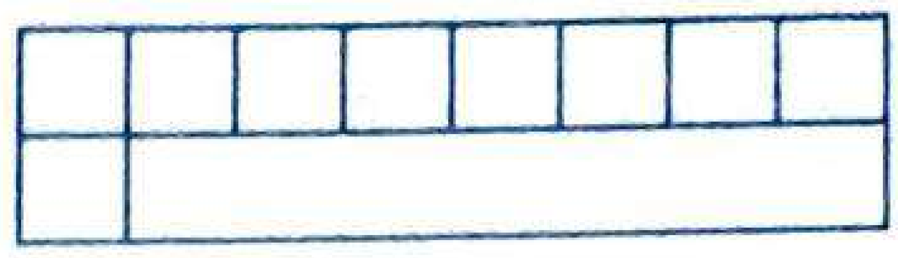
## Practice

Determine the area of each shape.



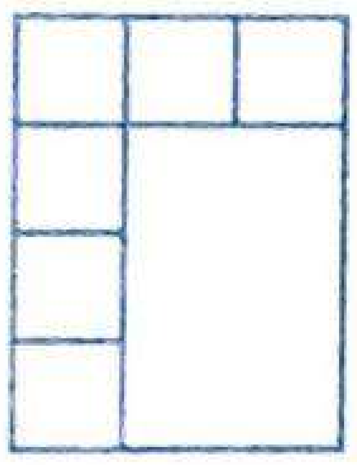
Area = ____ rows × ____ columns

= ____ square units



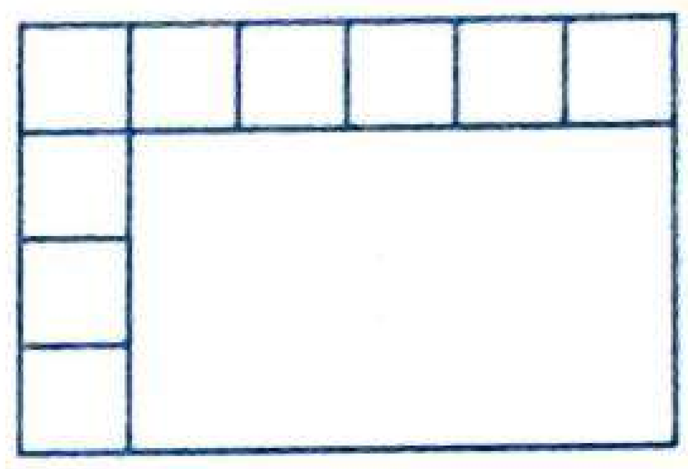
Area = ____ rows × ____ columns

= ____ square units



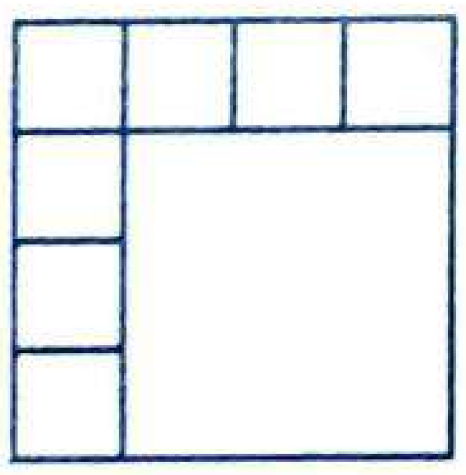
Area = ____ rows × ____ columns

= ____ square units



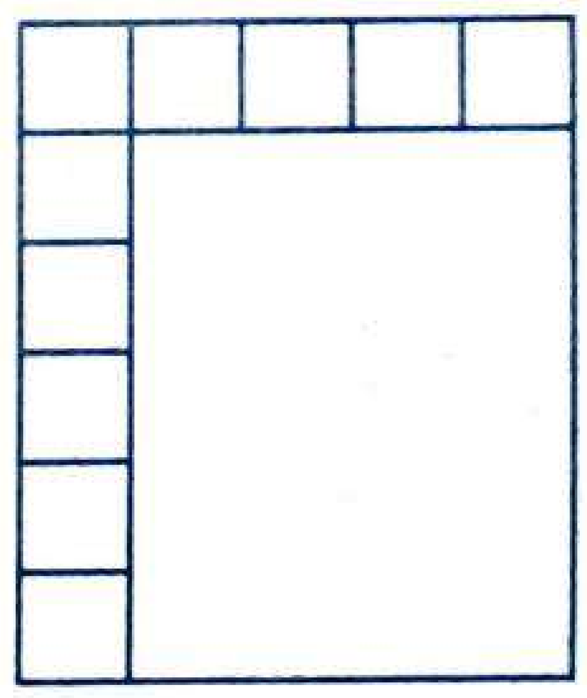
Area = ____ rows × ____ columns

= ____ square units



Area = ____ rows × ____ columns

= ____ square units



Area = ____ rows × ____ columns

= ____ square units

## Challenge

- Use your ruler to measure the width and the length of the rectangle.
  Calculate the area of the rectangle.




• Ask your child to draw a rectangle of 7 × 8 and find its area.

Place a smiley face

Lessons **38** to **40**

# Distributive property of multiplication

## Learn — Distributive property

*Vocabulary*

*Distributive property tells us we can divide (break apart) a multiplication problem into two or more smaller problems, add together their products, and get the final answer.*

- To find how many squares in big arrays as the following array :

Multiply the number of rows by the number in each row.

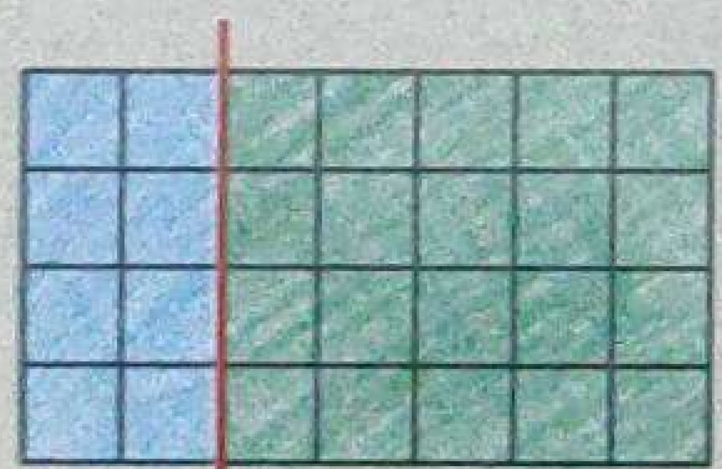
4 rows of 7 $\quad \underset{\text{rows}}{4} \times \underset{\text{in each row}}{7} = \underset{\text{Total}}{28}$




**Another way using distributive property :**

Break apart an array into two smaller arrays and add the products of the two arrays.

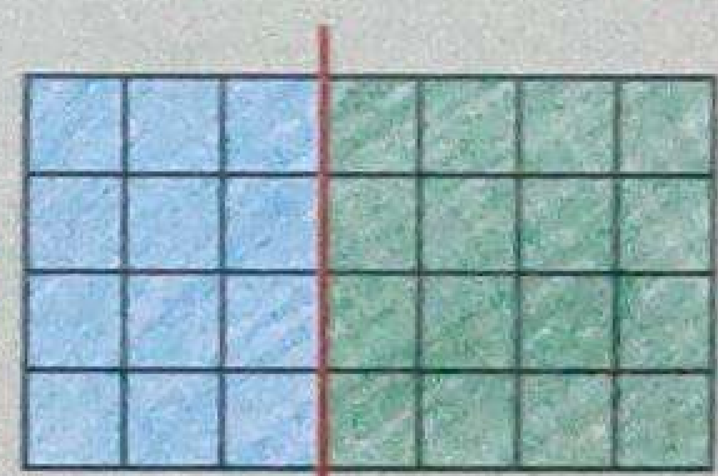
*(There are more than one correct way to break apart an array).*




4 rows of 2 $\quad \underset{\text{rows}}{4} \times \underset{\text{in each row}}{2} = 8$

4 rows of 5 $\quad \underset{\text{rows}}{4} \times \underset{\text{in each row}}{5} = 20$

$8 + 20 = 28$




4 rows of 3 $\quad \underset{\text{rows}}{4} \times \underset{\text{in each row}}{3} = 12$

4 rows of 4 $\quad \underset{\text{rows}}{4} \times \underset{\text{in each row}}{4} = 16$

$12 + 16 = 28$

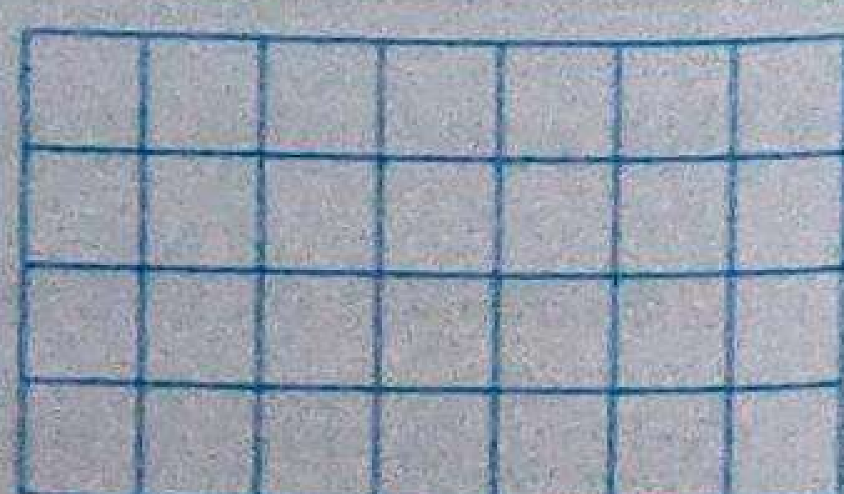
**From above :**

$4 \times 7 = (4 \times 2) + (4 \times 5)$

$4 \times 7 = (4 \times 3) + (4 \times 4)$

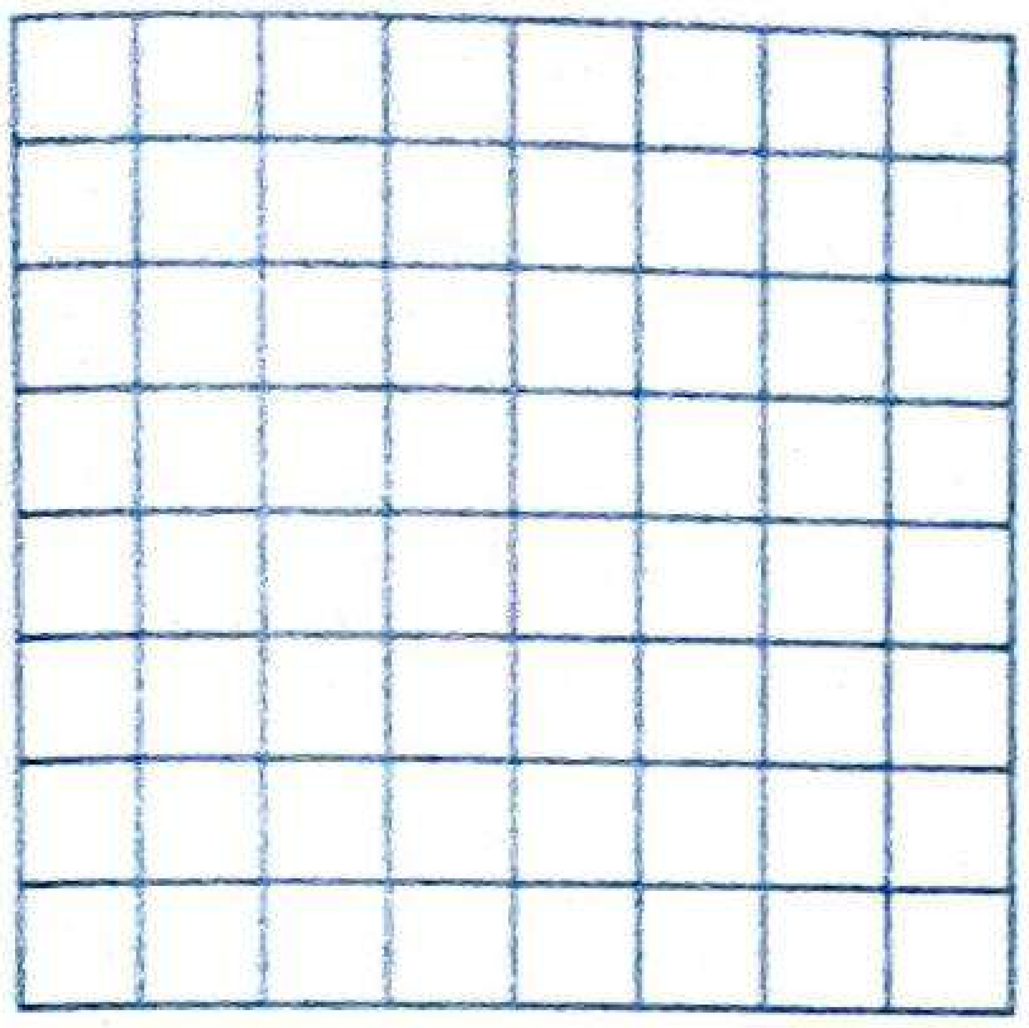
## Check

Find another way to break apart the same array. Write the two equations of the two smaller arrays.

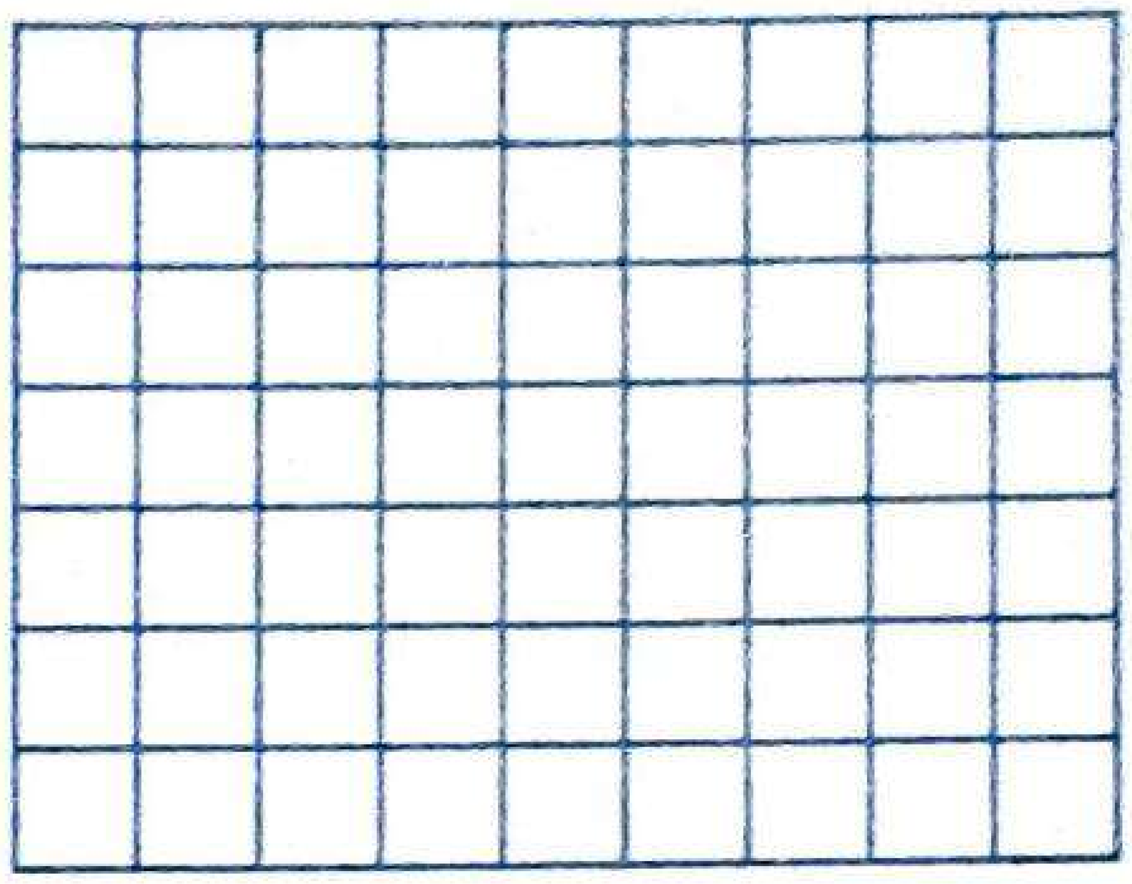


## Practice

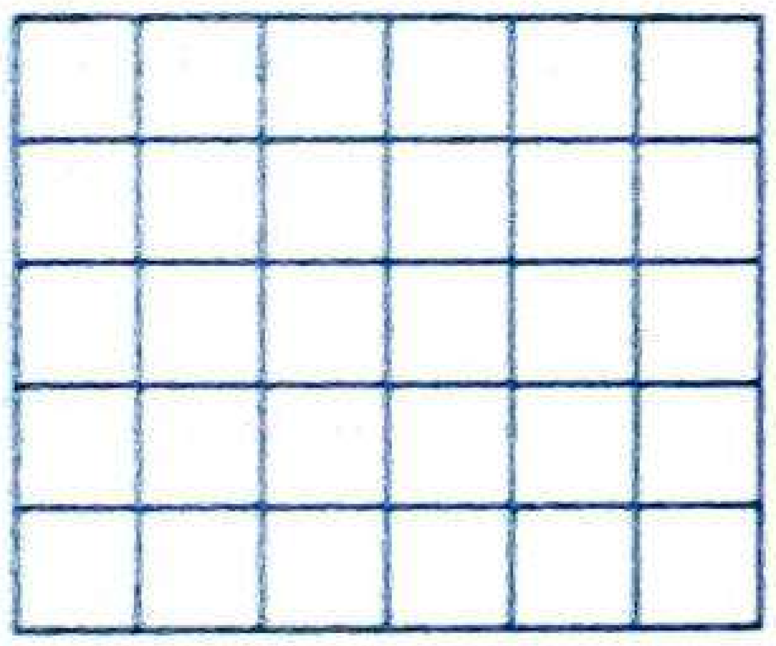
Break apart the following arrays according to the distributive property equations.



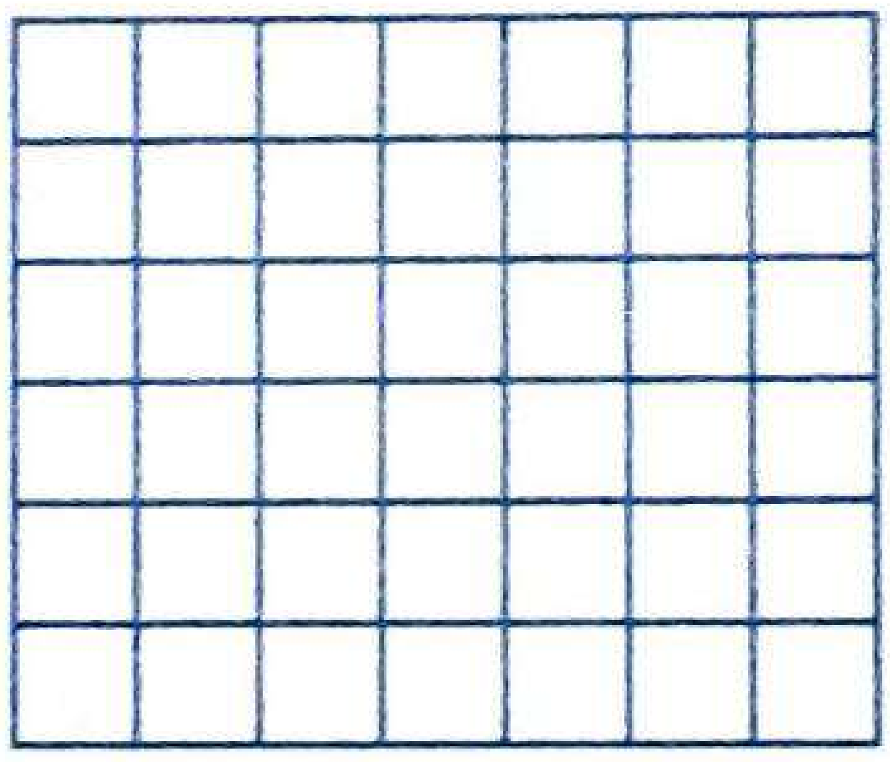
$8 \times 8 = (8 \times 5) + (8 \times 3)$



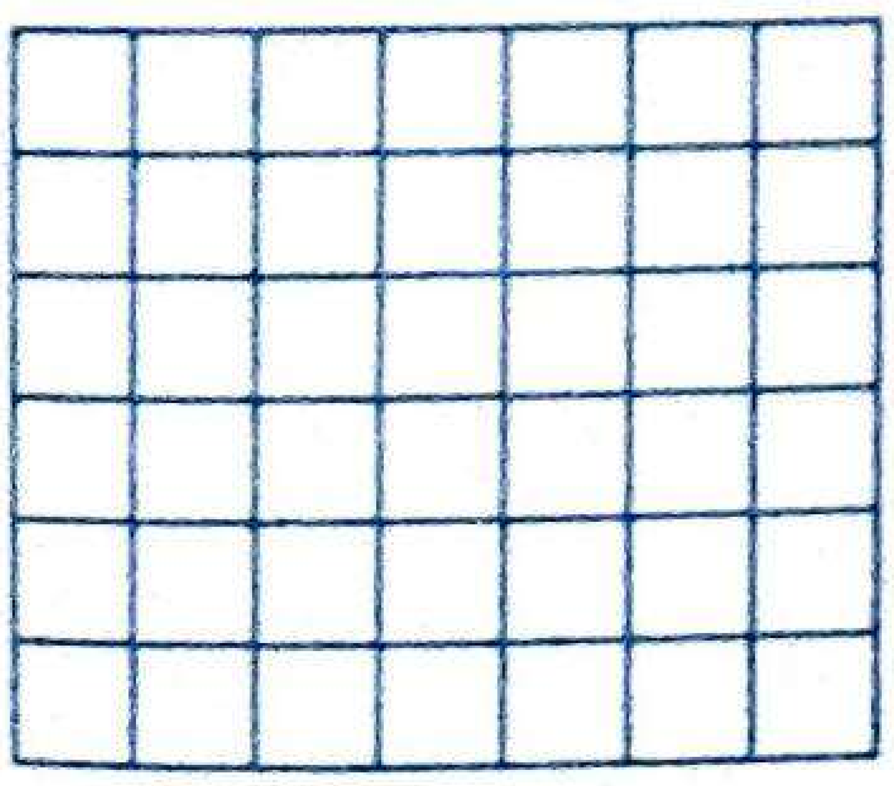
$7 \times 9 = (7 \times 2) + (7 \times 7)$



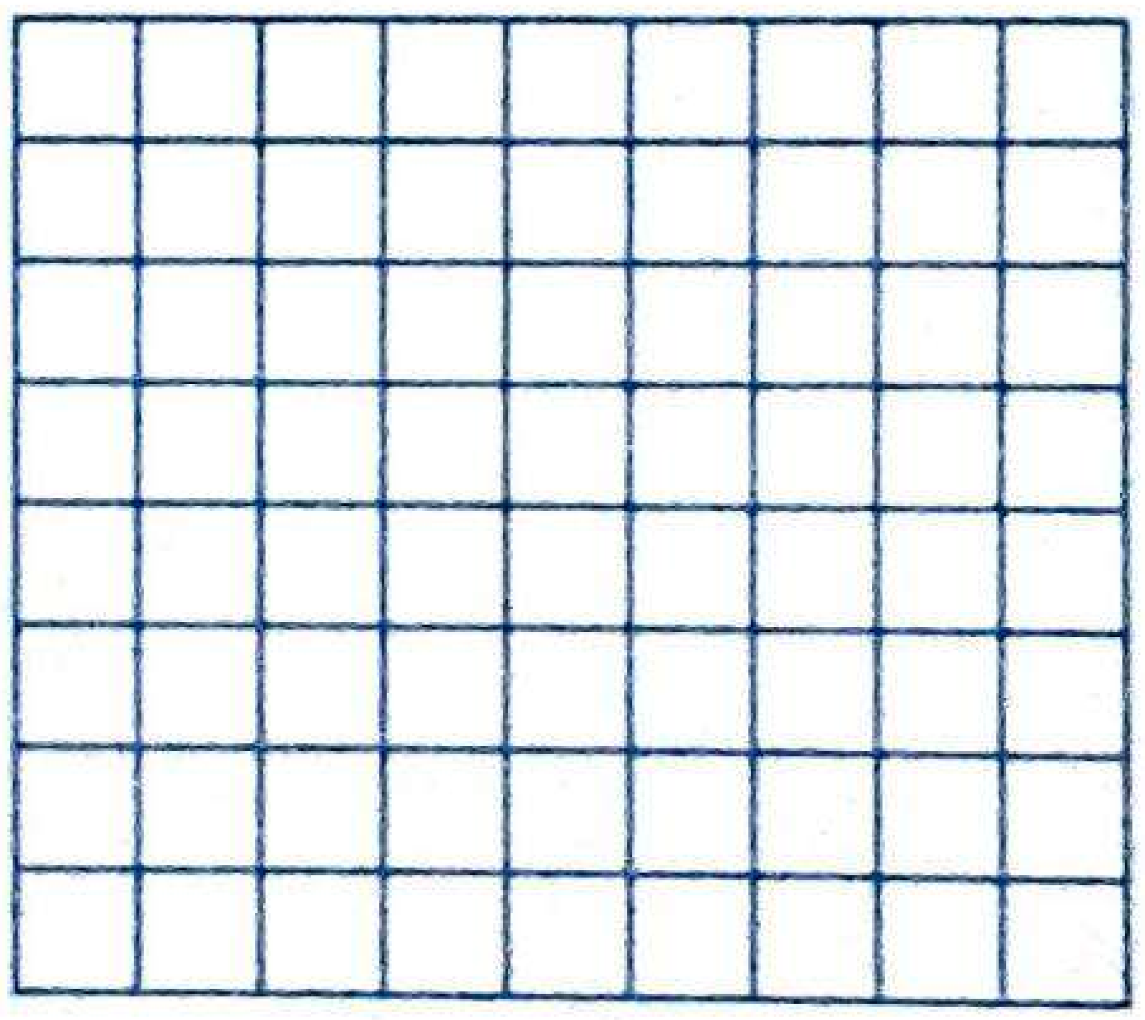
$5 \times 6 = (5 \times 4) + (5 \times 2)$



$6 \times 7 = (6 \times 1) + (6 \times 6)$

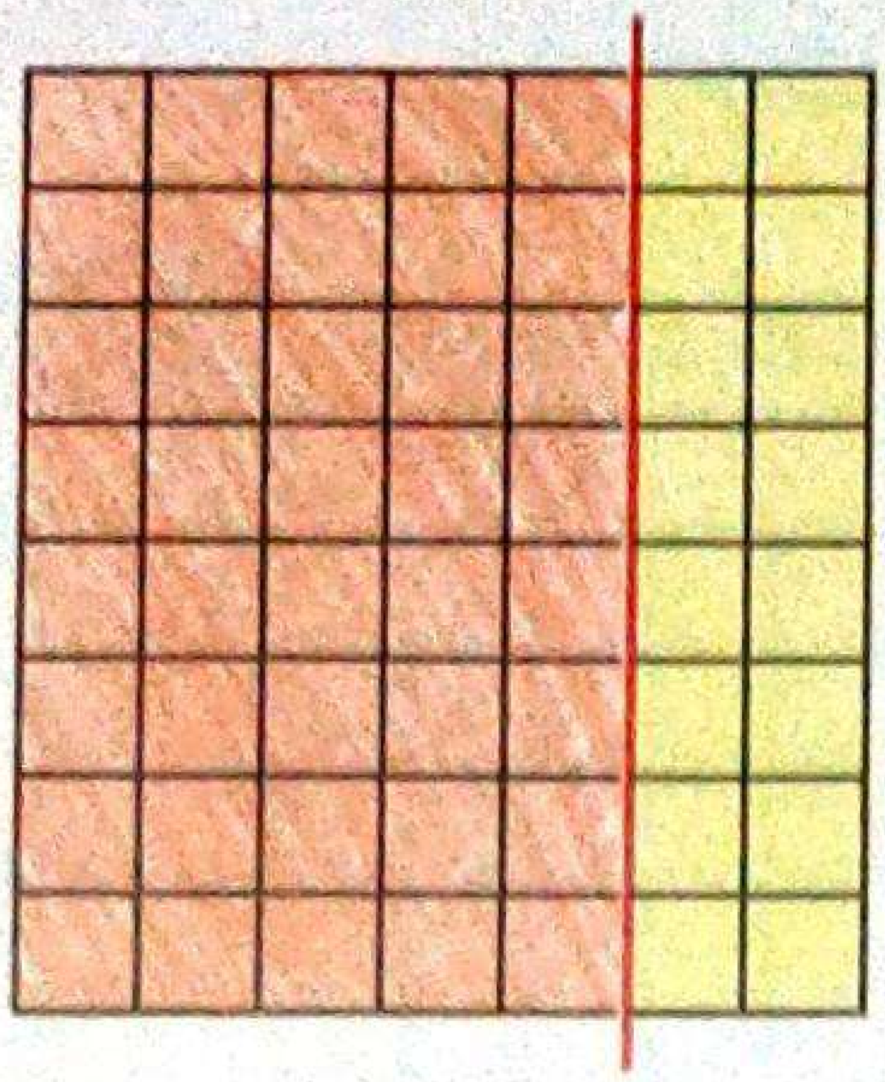


$6 \times 7 = (6 \times 3) + (6 \times 4)$

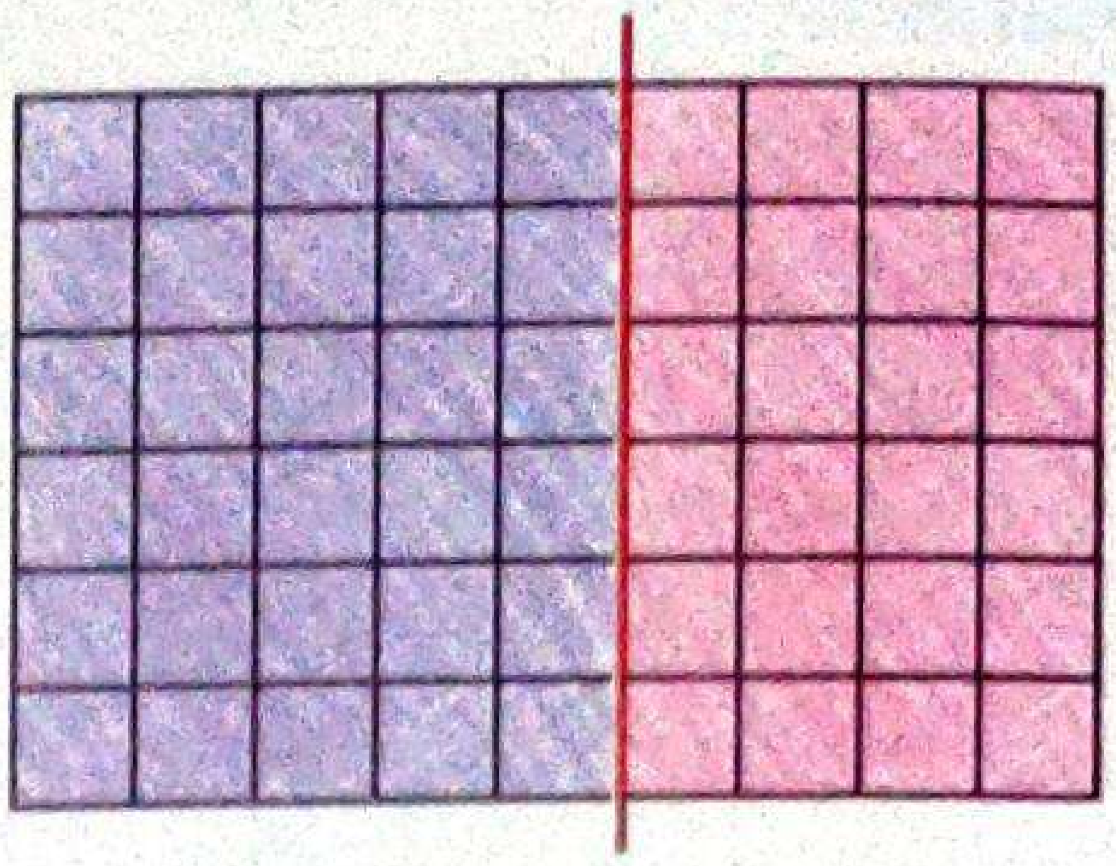


$8 \times 9 = (8 \times 4) + (8 \times 5)$

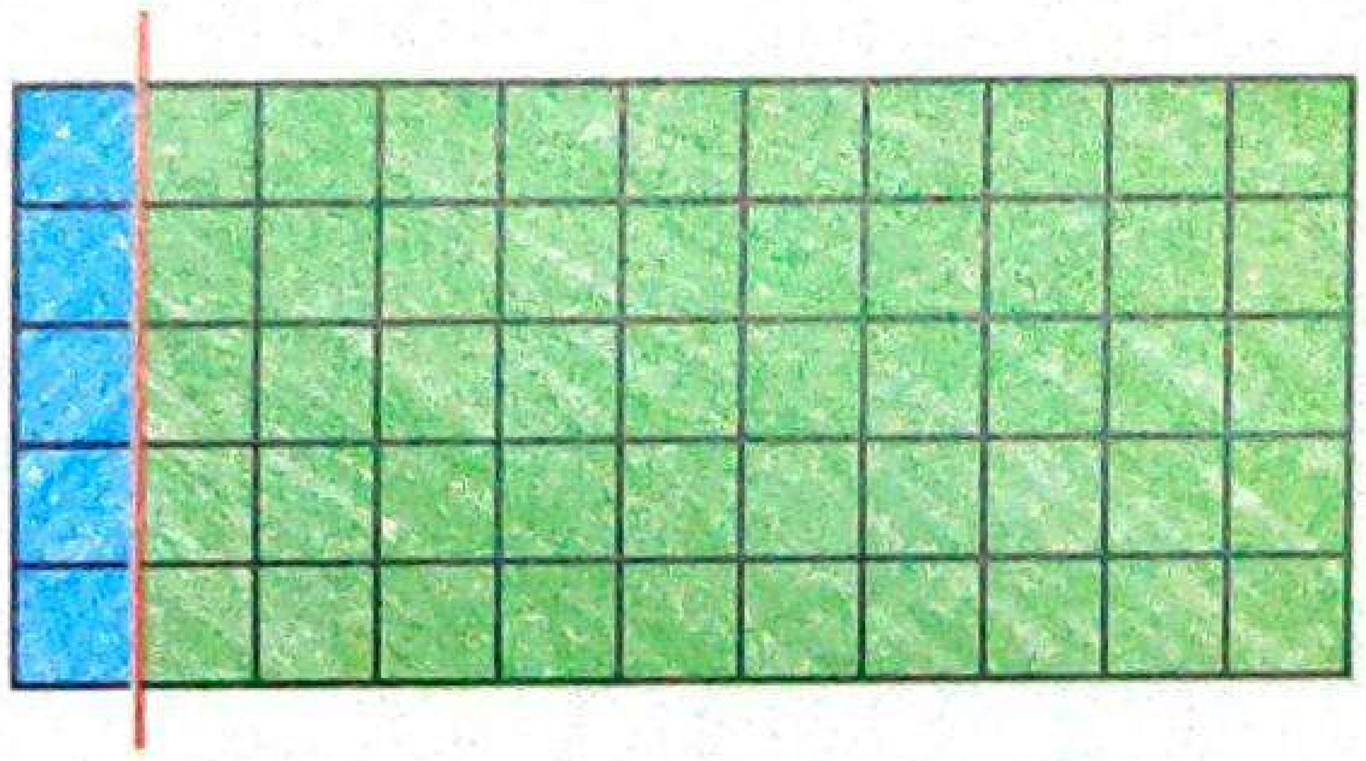
Write the distributive property equation of each.



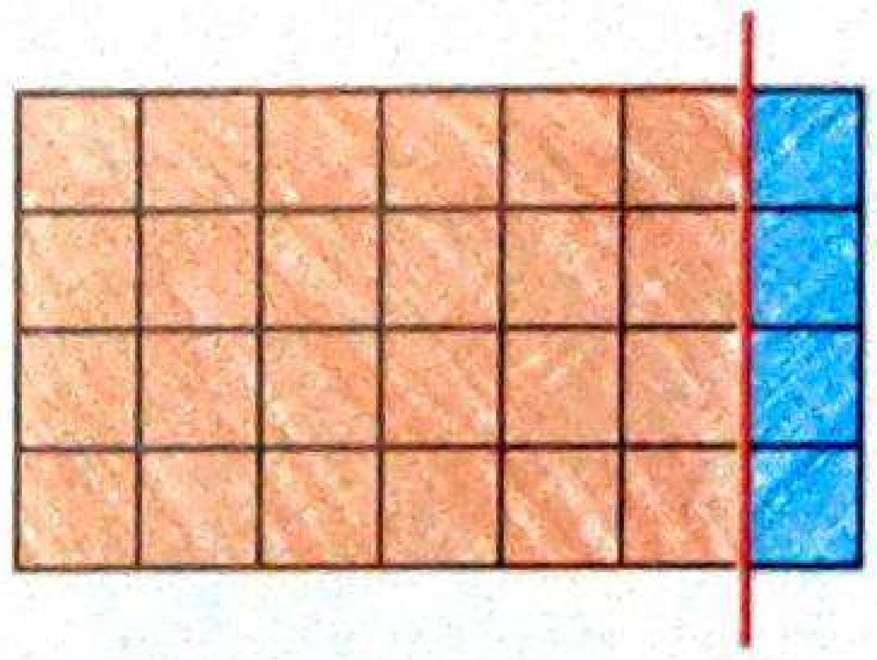
8 × ☐ = (☐ × ☐) + (☐ × ☐)



☐ × ☐ = (☐ × ☐) + (☐ × ☐)

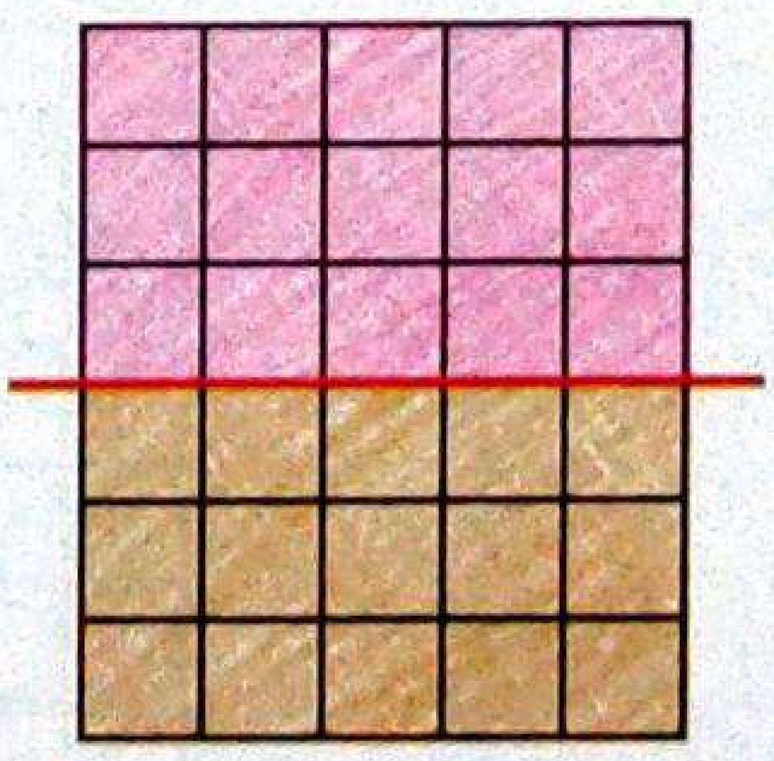


☐ × ☐ = (☐ × ☐) + (☐ × ☐)



☐ × ☐ = (☐ × ☐) + (☐ × ☐)

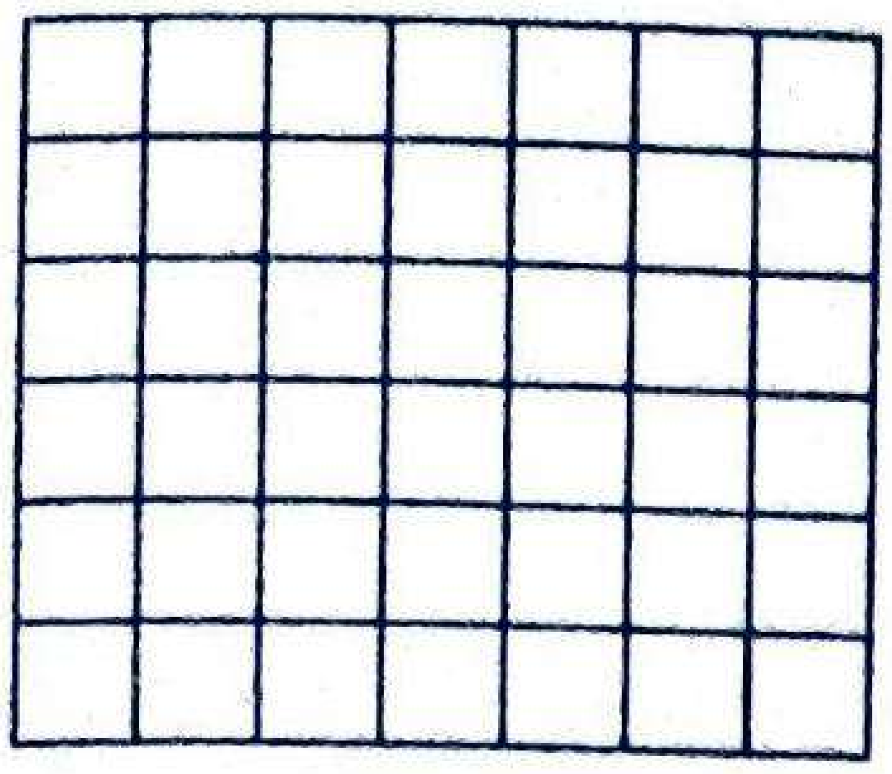
## Challenge



☐ × ☐ = (☐ × ☐) + (☐ × ☐)

Break apart the arrays, using the distributive property write the equations.

Answers may vary !



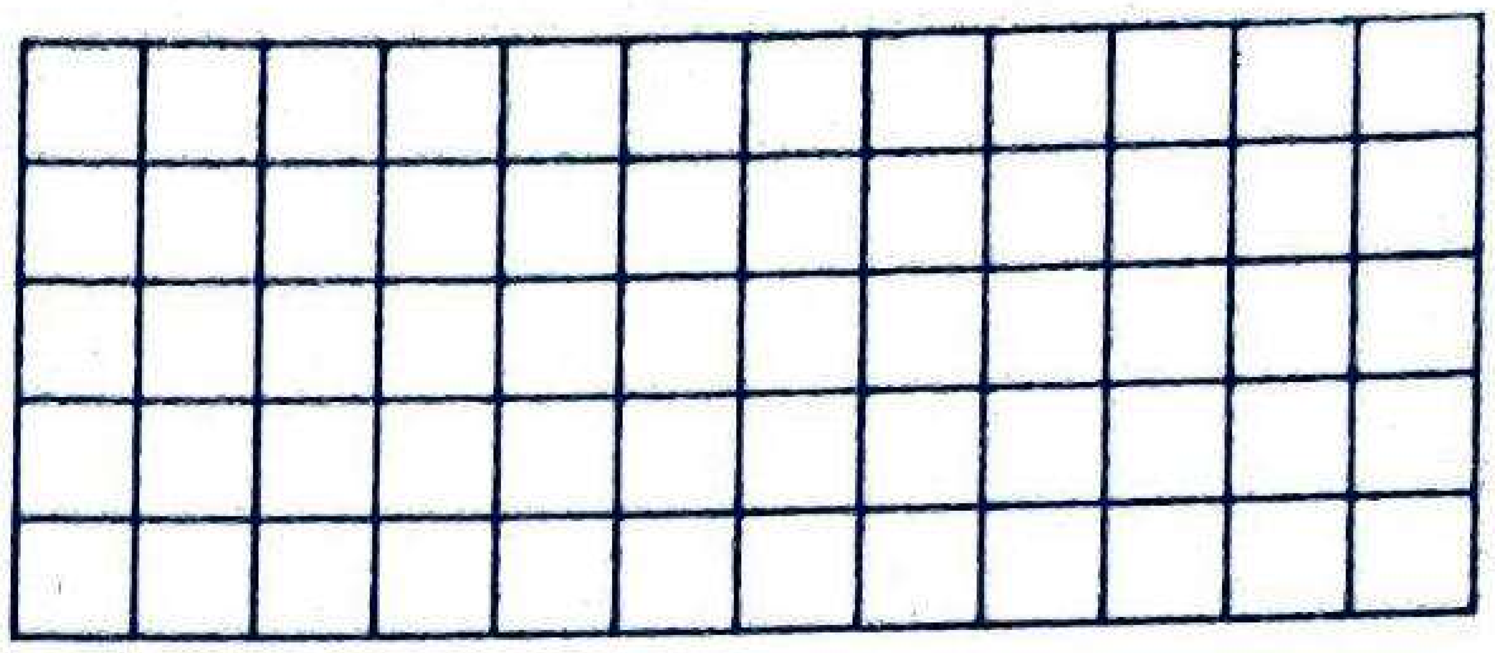
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$6 \times 7 =$ ◯

$6 \times 7 = ($ ____ $\times$ ____ $) + ($ ____ $\times$ ____ $)$



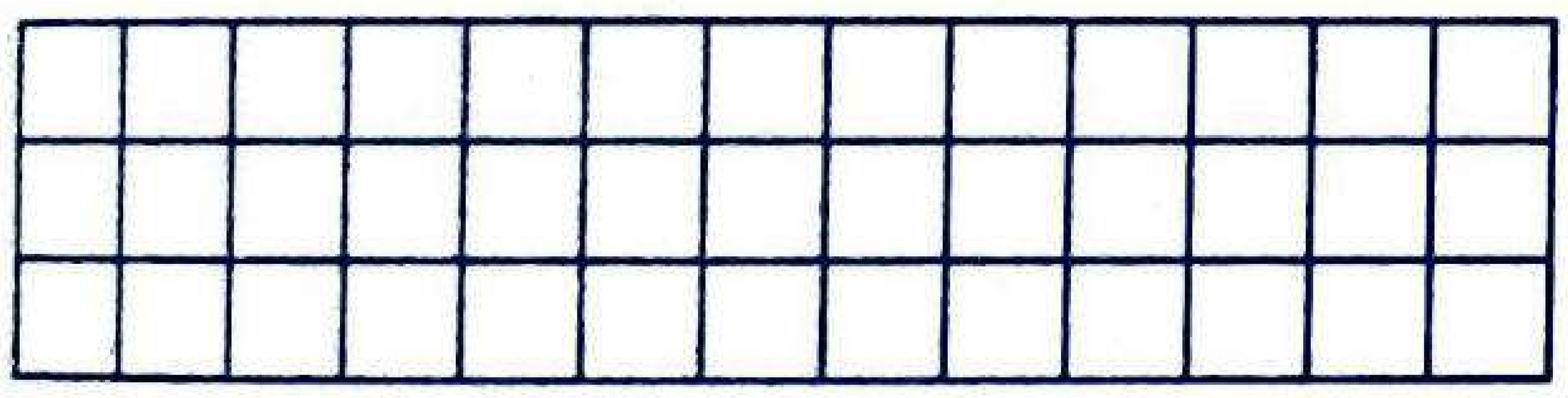
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$5 \times 12 =$ ◯

$5 \times 12 = ($ ____ $\times$ ____ $) + ($ ____ $\times$ ____ $)$



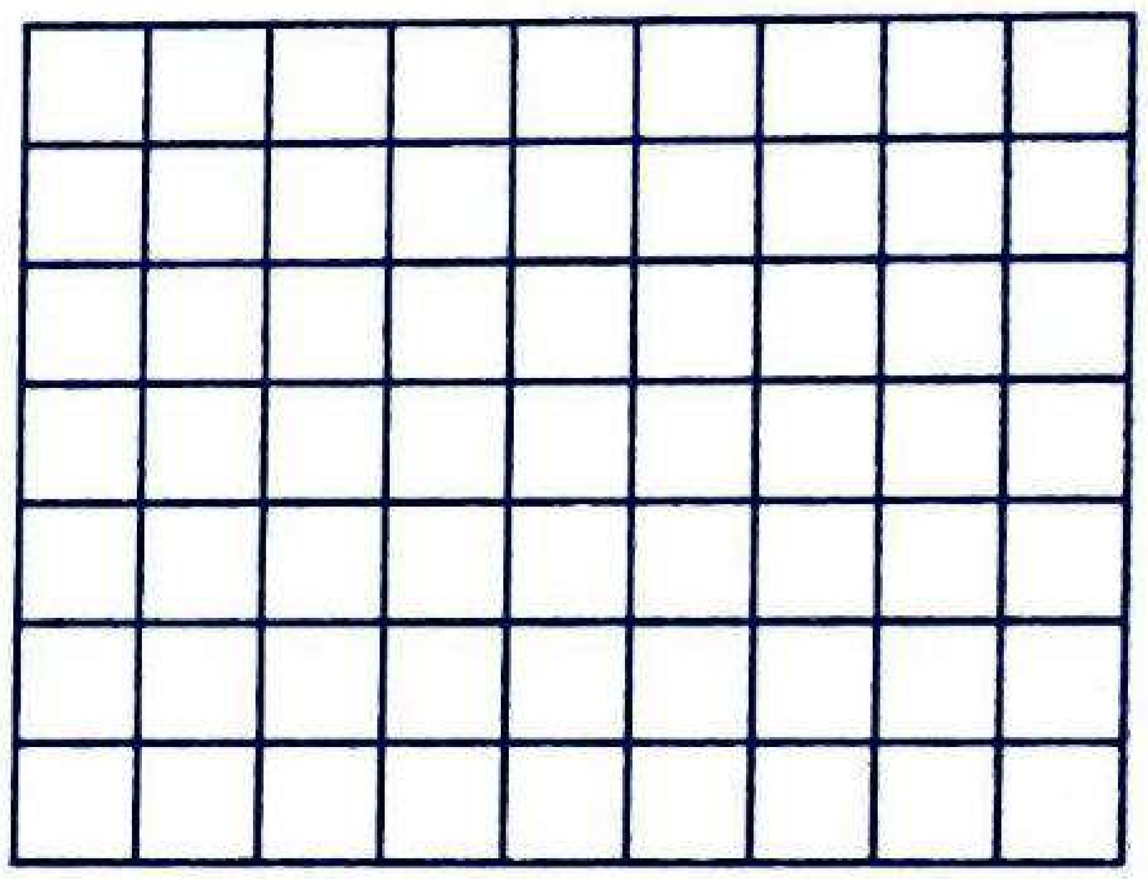
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$3 \times 13 =$ ◯

$3 \times 13 = ($ ____ $\times$ ____ $) + ($ ____ $\times$ ____ $)$



☐ × ☐ = ☐

☐ × ☐ = ☐

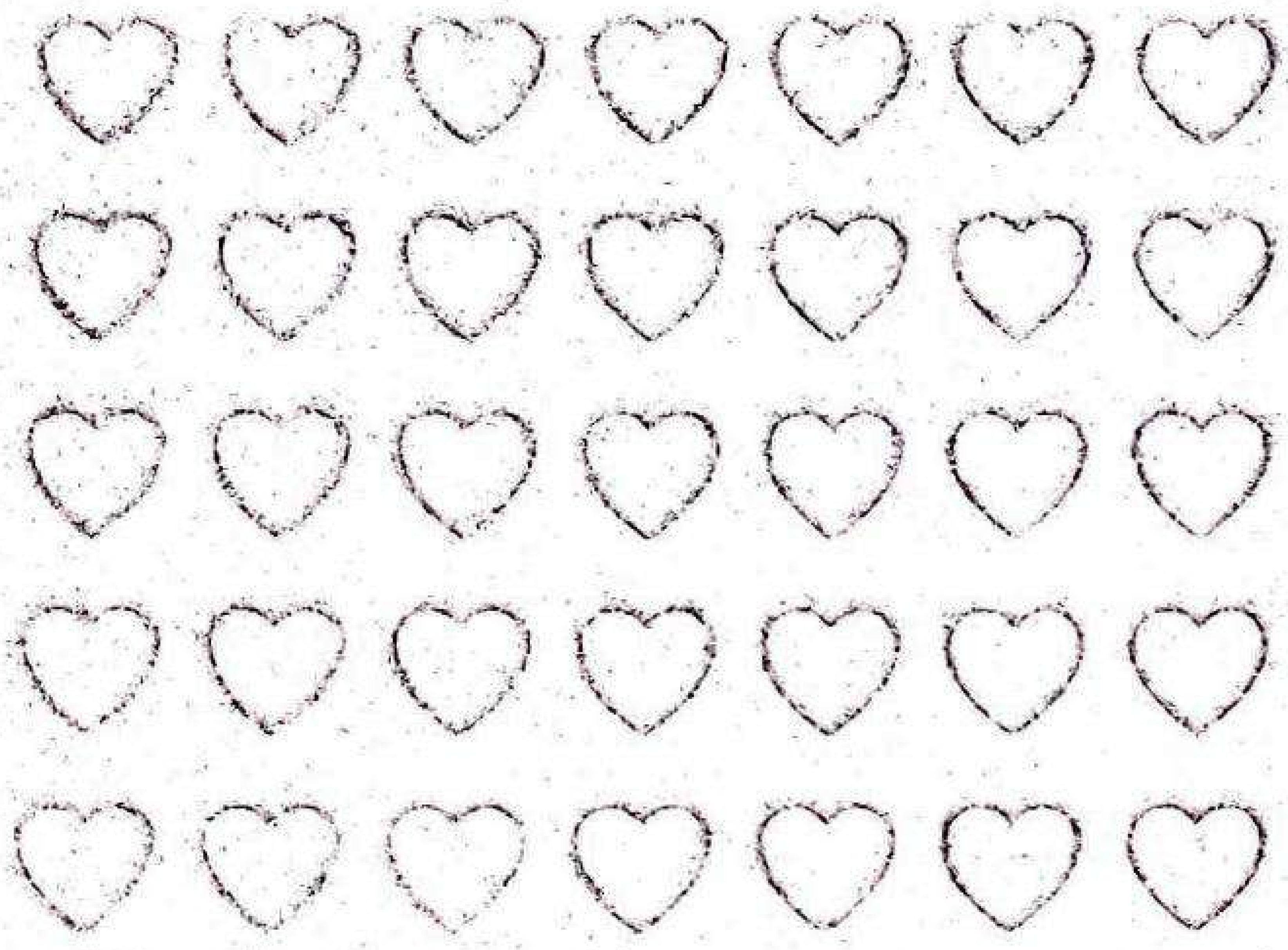
☐ + ☐ = ◯

$7 \times 9 =$ ◯

$7 \times 9 = ($ ____ $\times$ ____ $) + ($ ____ $\times$ ____ $)$

**Break apart each of the following arrays into two smaller arrays. Use different colors to keep track of your different arrays. Write the equations that match it.**

Answers may vary



$\square \times \square = \square$

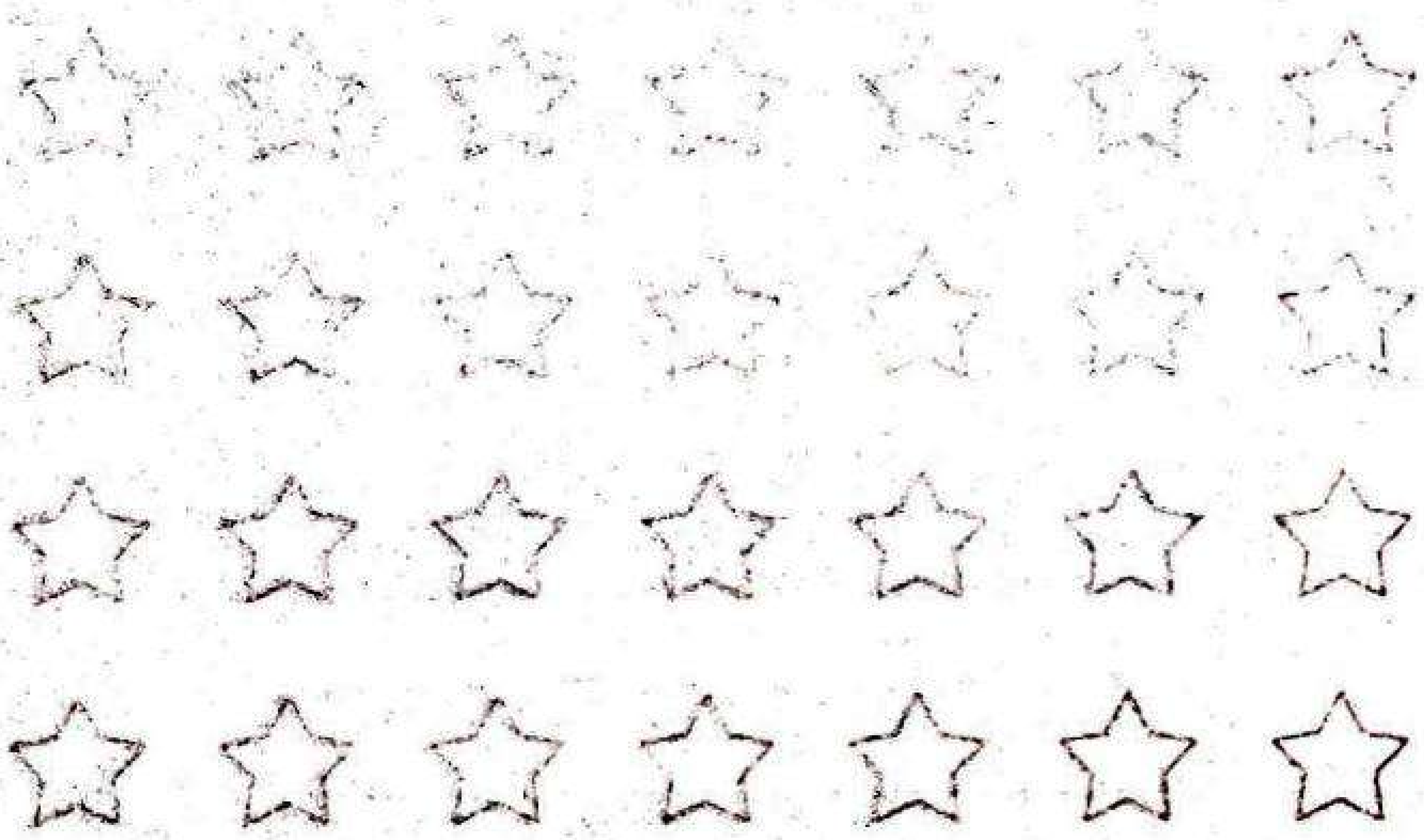
$\square \times \square = \square$

$\square + \square = \bigcirc$

$5 \times 7 = \bigcirc$

$5 \times 7 = (___ \times ___) + (___ \times ___)$

---



$\square \times \square = \square$

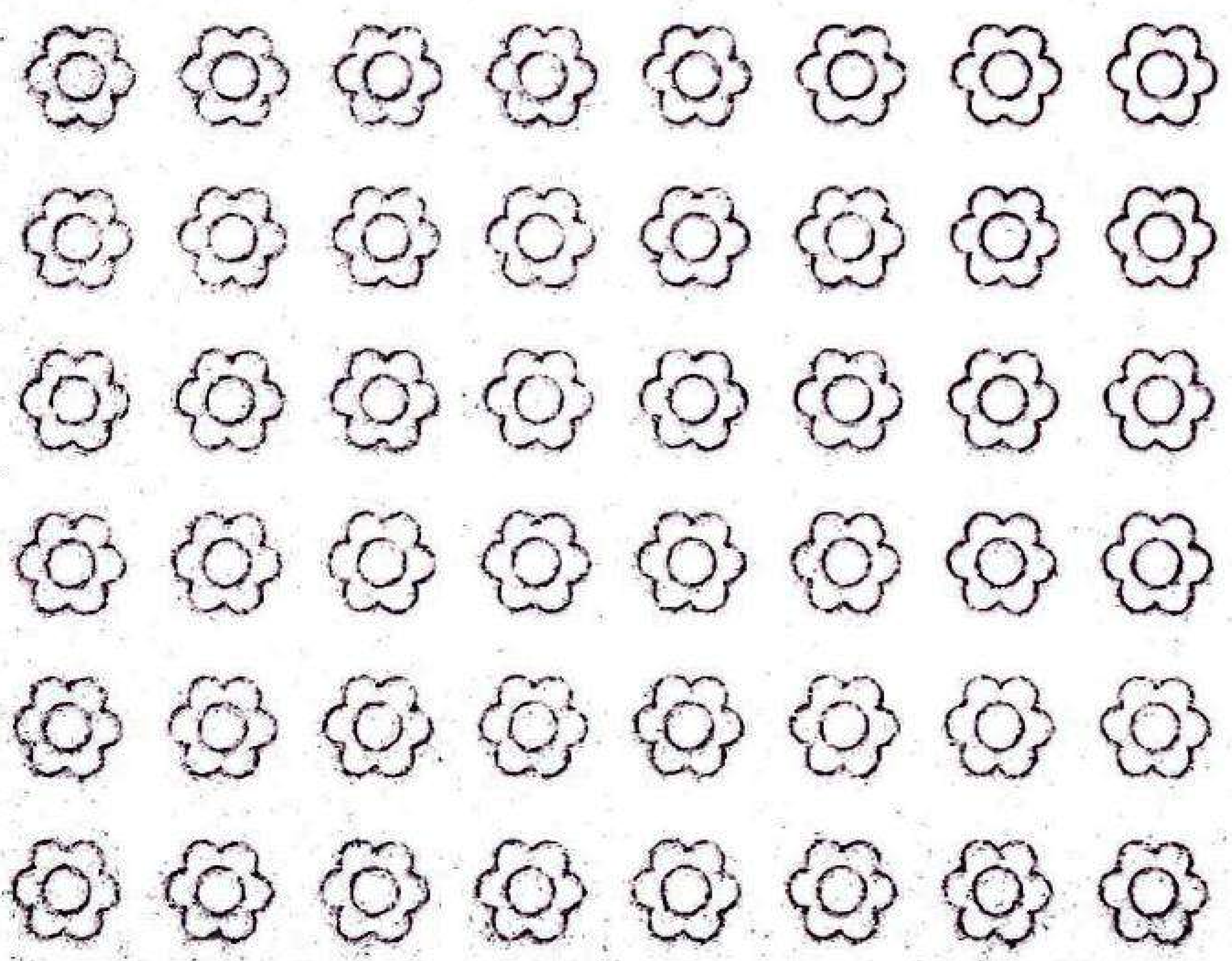
$\square \times \square = \square$

$\square + \square = \bigcirc$

$4 \times 7 = \bigcirc$

$4 \times 7 = (___ \times ___) + (___ \times ___)$

---



$\square \times \square = \square$

$\square \times \square = \square$

$\square + \square = \bigcirc$

$6 \times 8 = \bigcirc$

$6 \times 8 = (___ \times ___) + (___ \times ___)$

Use the distributive property to complete the following equations.

$3 \times 9 = (3 \times 6) + (3 \times ____)$

$4 \times 7 = (4 \times 2) + (4 \times ____)$

$8 \times 12 = (____ \times 2) + (8 \times ____)$

$9 \times 9 = (9 \times 4) + (____ \times ____)$

$6 \times 6 = (6 \times 5) + (6 \times ____)$

$4 \times 8 = (4 \times 4) + (____ \times ____)$

$7 \times 9 = (____ \times 4) + (7 \times ____)$

$5 \times 15 = (5 \times 5) + (____ \times ____)$

Use the distributive property to complete the following equations and find the total.

$6 \times 7 = (6 \times 2) + (6 \times ____)$
$= ____ + ____$
$= ____$

$9 \times 8 = (9 \times 4) + (9 \times ____)$
$= ____ + ____$
$= ____$

$4 \times 9 = (4 \times ____) + (____ \times 5)$
$= ____ + ____$
$= ____$

$3 \times 14 = (____ \times 4) + (____ \times ____)$
$= ____ + ____$
$= ____$

$9 \times 6 = (____ \times 3) + (____ \times ____)$
$= ____ + ____$
$= ____$

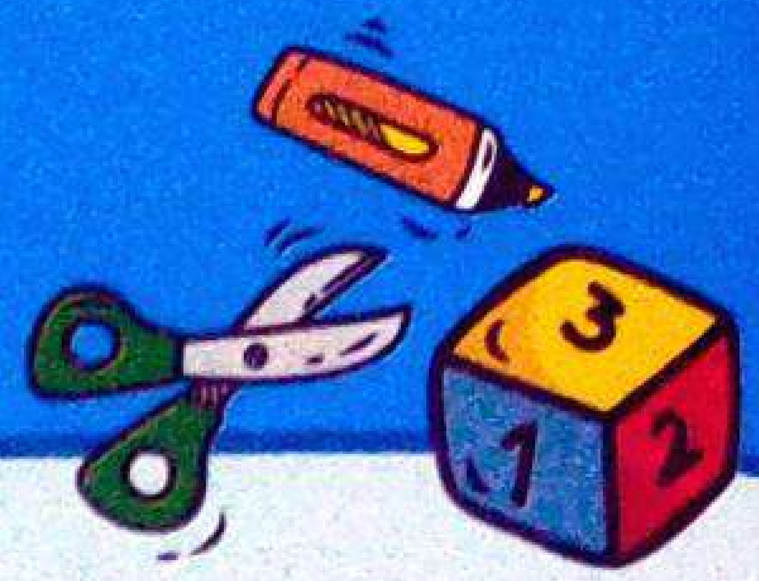
$5 \times 7 = (____ \times 6) + (____ \times ____)$
$= ____ + ____$
$= ____$

$12 \times 2 = (____ \times 1) + (____ \times 12)$
$= ____ + ____$
$= ____$

$10 \times 11 = (____ \times 10) + (____ \times 1)$
$= ____ + ____$
$= ____$

# Activity

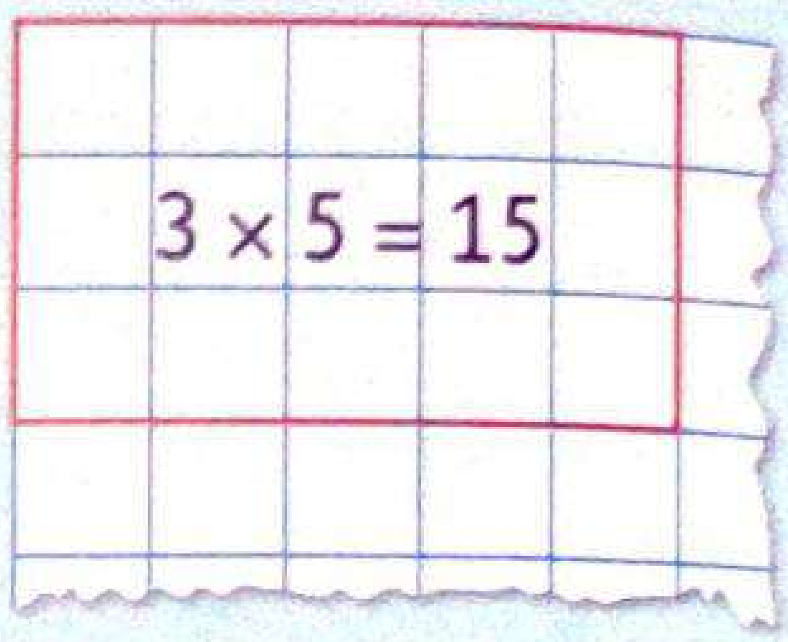
## Chapter 4

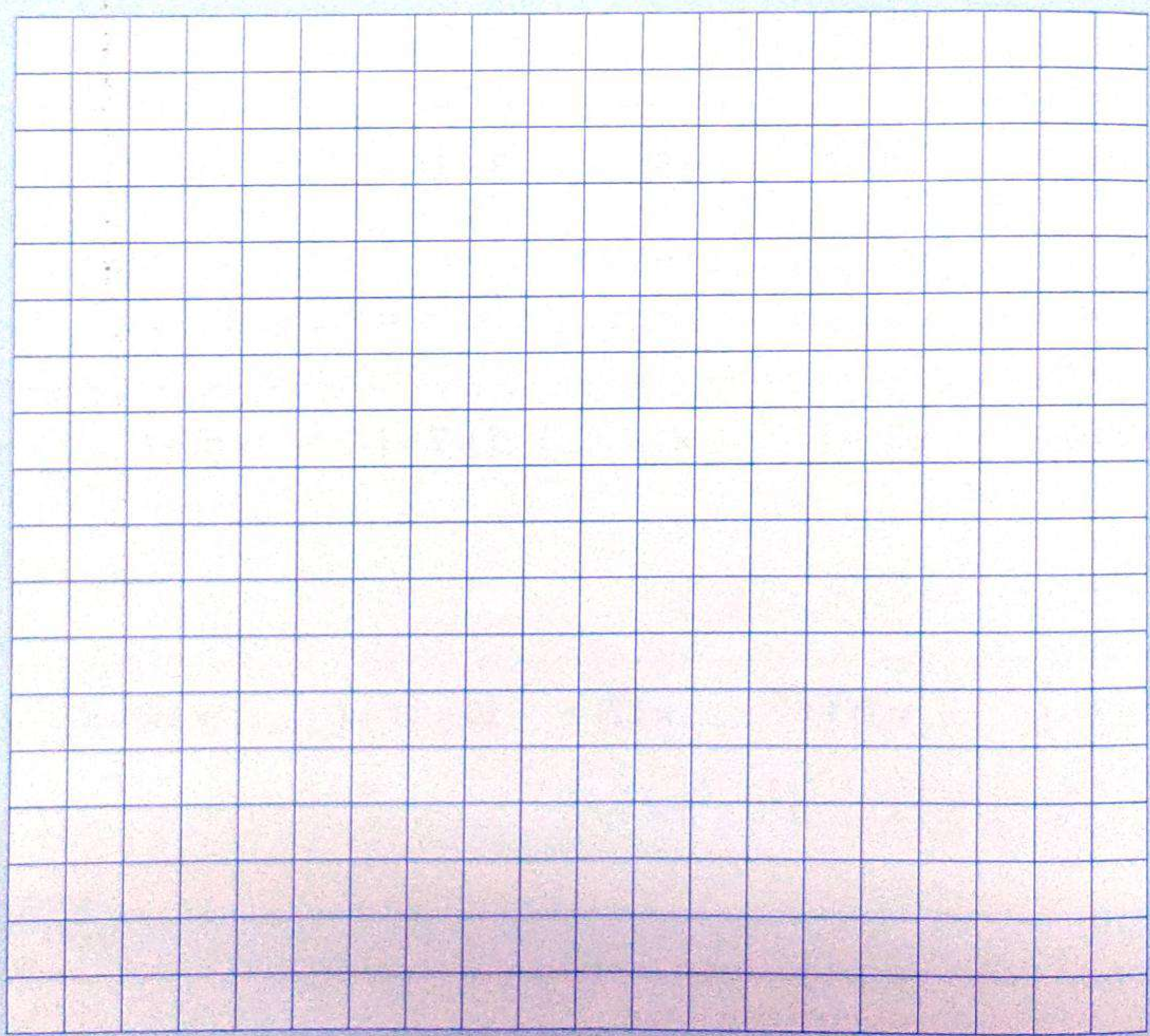


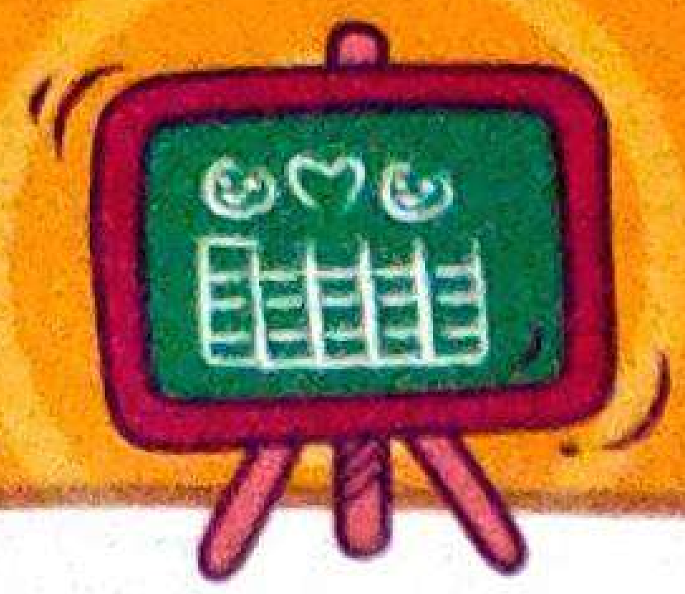
### Area dice game



- A game for 2 or 3 players
- Each player chooses a color, to use to color areas.
- Players take turns rolling the dice twice (the first time for the length and the second time for the width), use the numbers that they rolled to draw a rectangle or a square, writing the area in the middle of the shape.
- Game ends when players run out of room to draw.
- Each player calculate his/her total area.
- The winner who has the largest area (most numbers of square units).



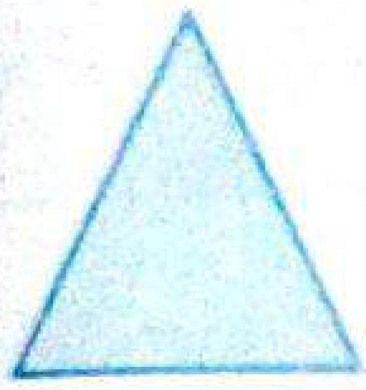
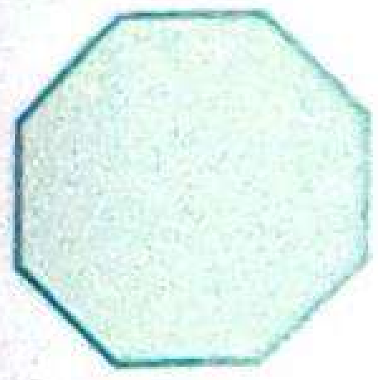
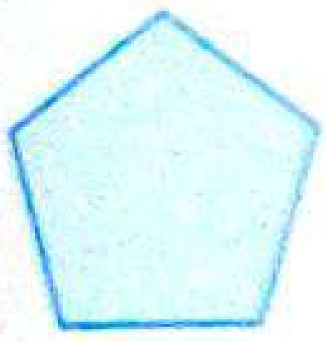
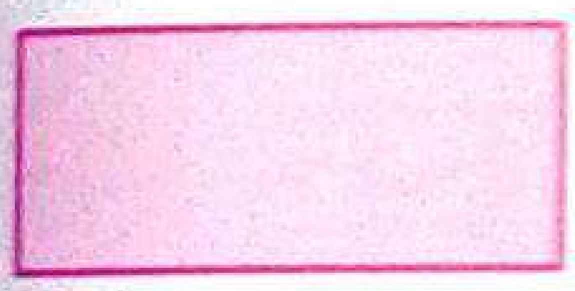
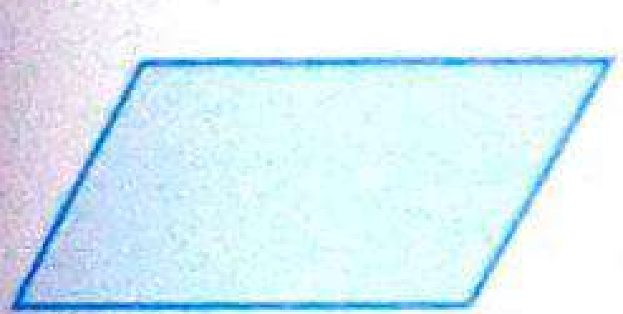
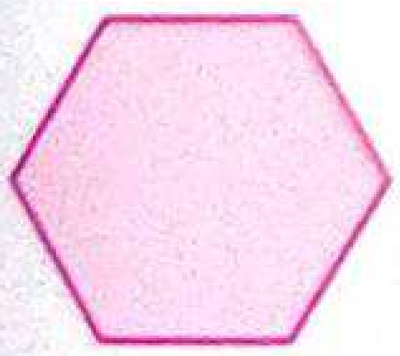
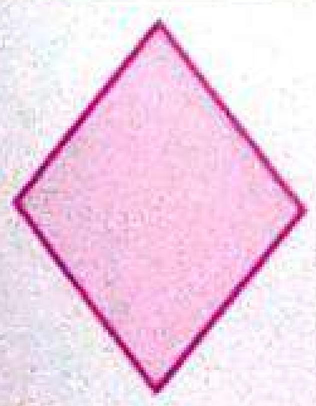





# Extra Practice

## Chapter 4

**1** Complete the following table. Check if the shape is a quadrilateral or not. Put (✓) if the shape is a quadrilateral. Put (✗) if it is not a quadrilateral.

| Shape | Name | Attributes | | Quadrilateral |
|---|---|---|---|---|
| | | Sides | Vertices | ✓ or ✗ |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |
|  | | | | |

## 2 Name each figure and write the missing numbers.



Name ______

___ equal sides

___ pairs of parallel sides

___ vertices



Name ______

___ pairs of equal sides

___ pairs of parallel sides

___ vertices



Name ______

___ pairs of equal sides

___ pairs of parallel sides

___ vertices

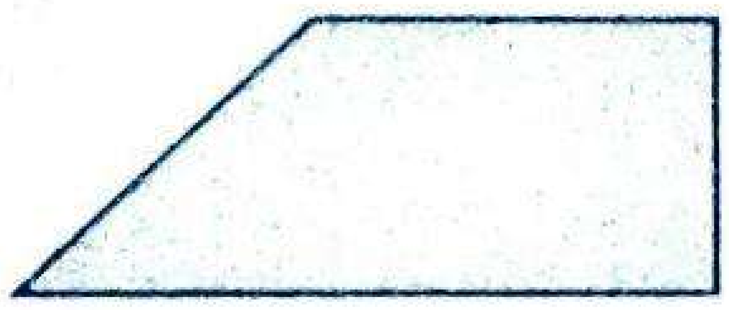


Name ______

___ equal sides

___ pairs of parallel sides

___ vertices



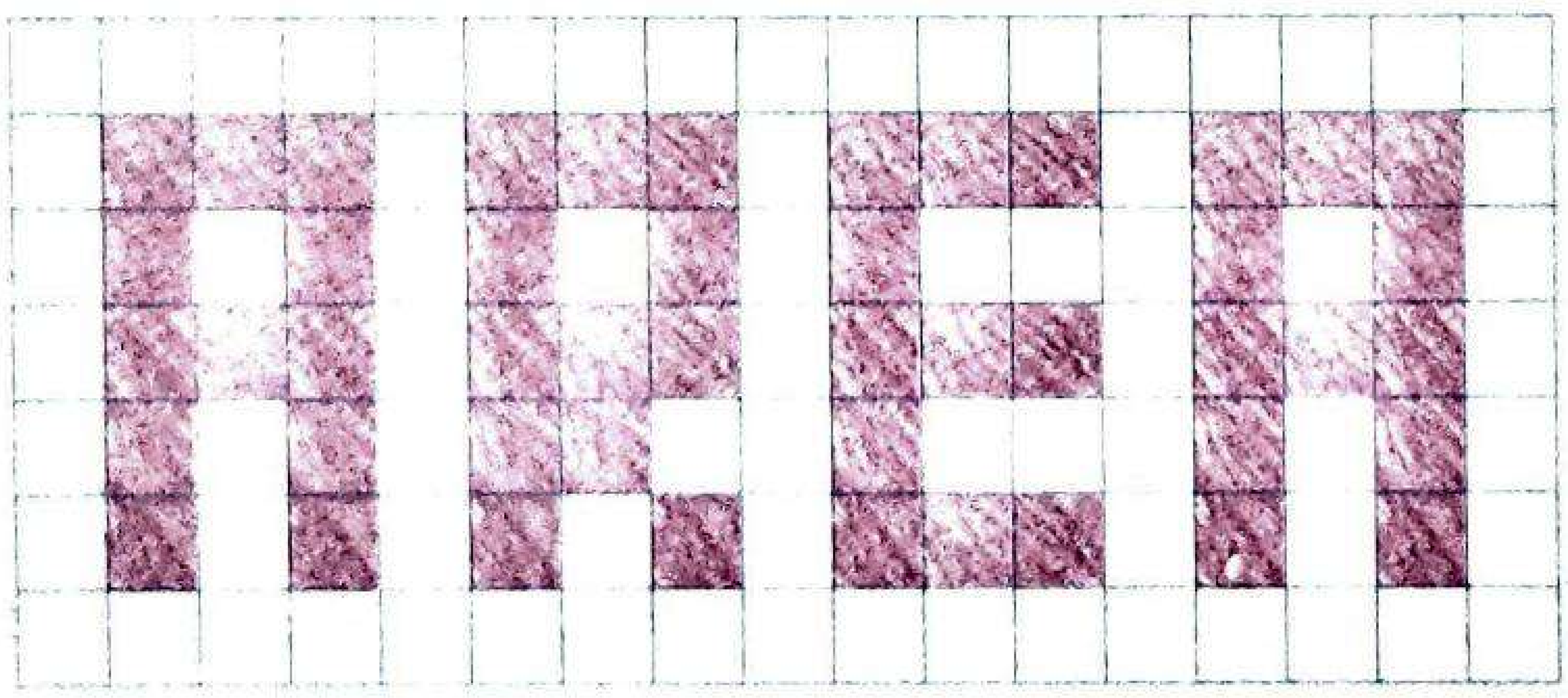
Name ______

___ equal sides

___ pair of parallel sides

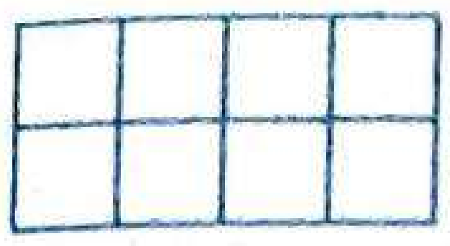
___ vertices

## 3 Look at the following figure. Then answer the questions.



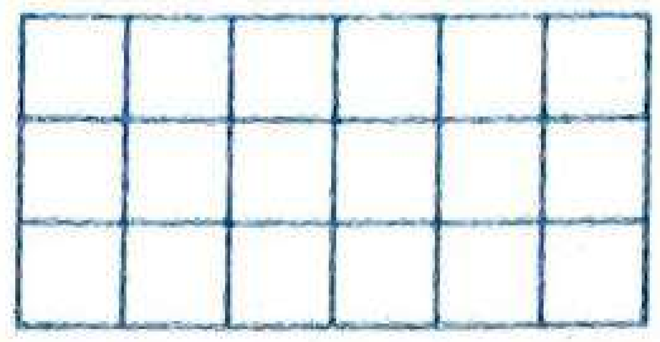
- What is the area of the letter A? ............
- What is the area of the letter R? ............
- What is the area of the letter E? ............
- What is the area of the word AREA? ............

## 4 Calculate the area of each of the following.



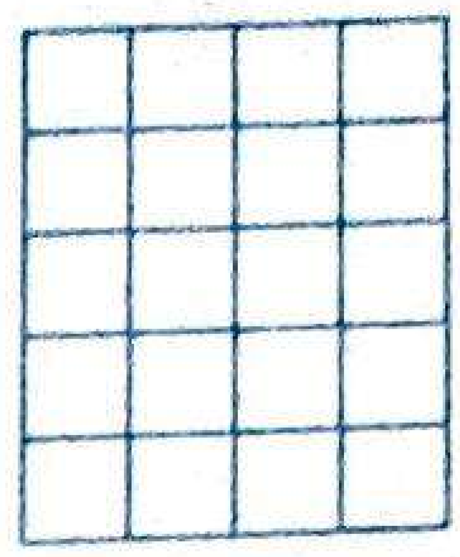
Area = ____ × ____

= ____ square units



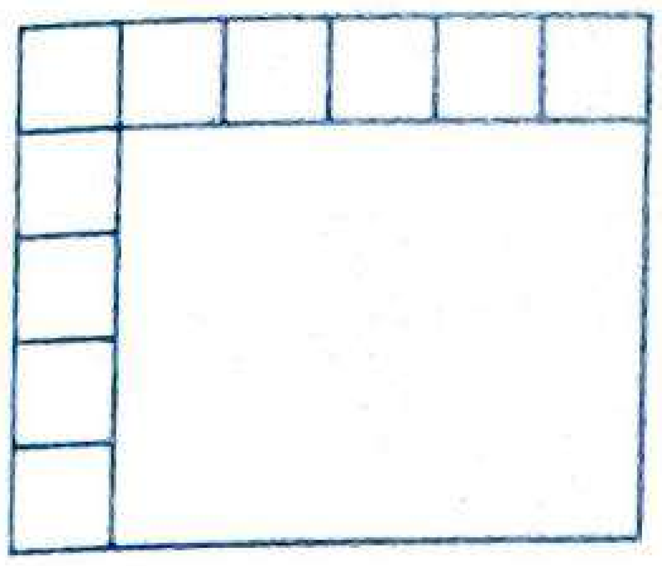
Area = ____ × ____

= ____ square units



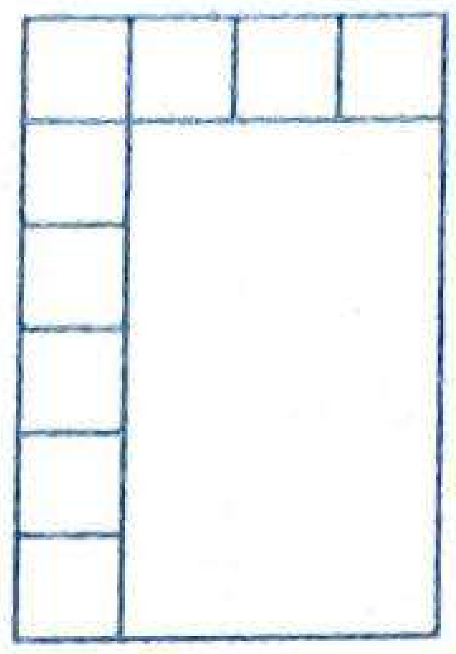
Area = ____ × ____

= ____ square units



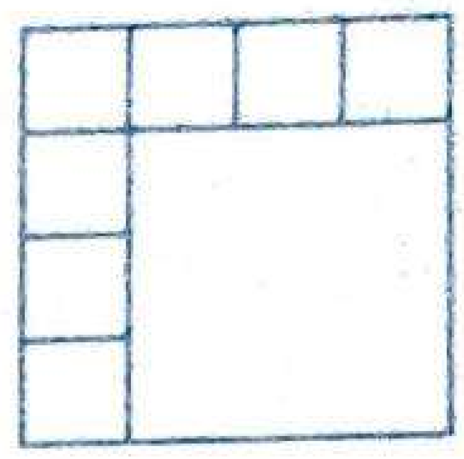
Area = ____ × ____

= ____ square units



Area = ____ × ____

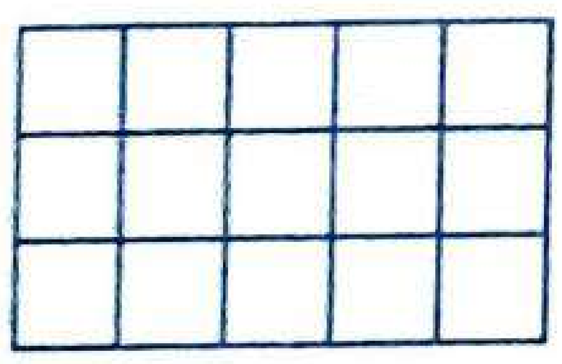
= ____ square units

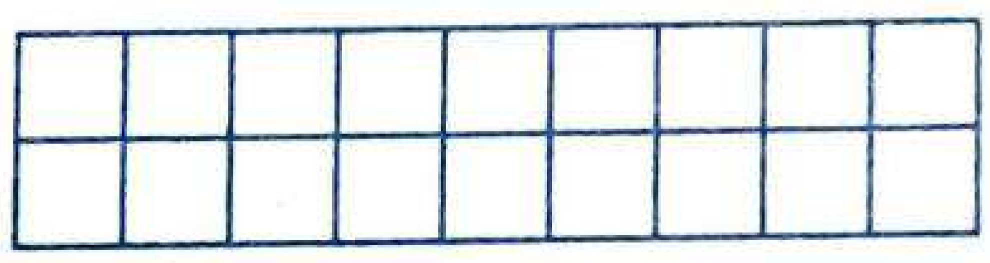


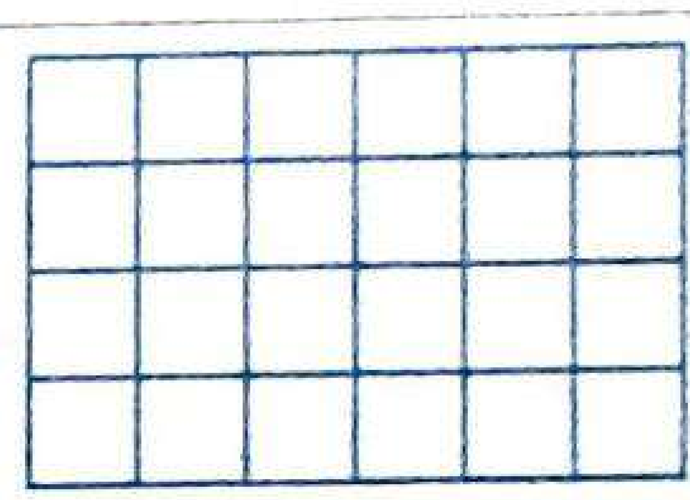
Area = ____ × ____

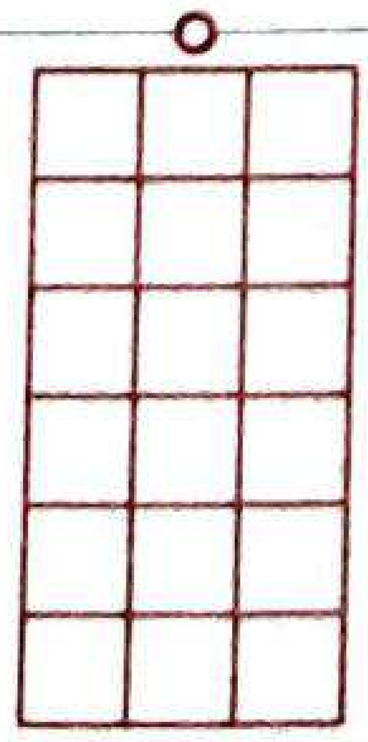
= ____ square units

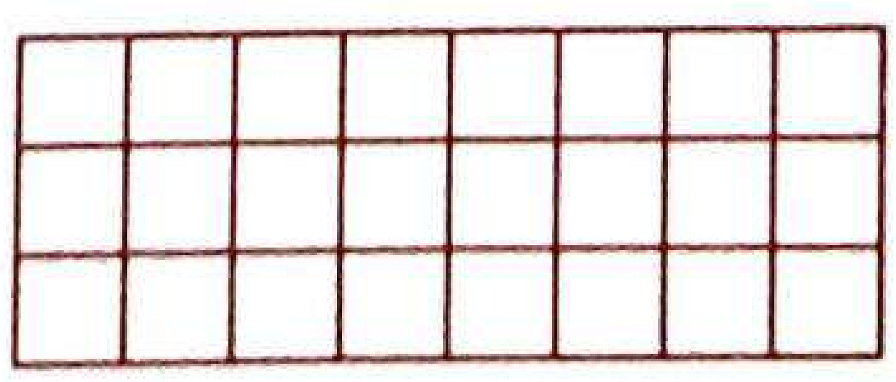
## 5 Write the multiplication sentence. Calculate the area. Match the equal areas.

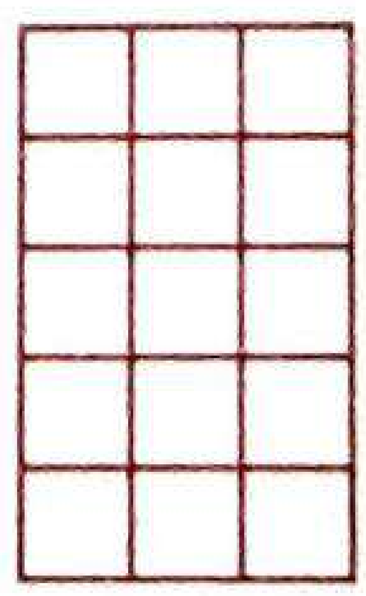




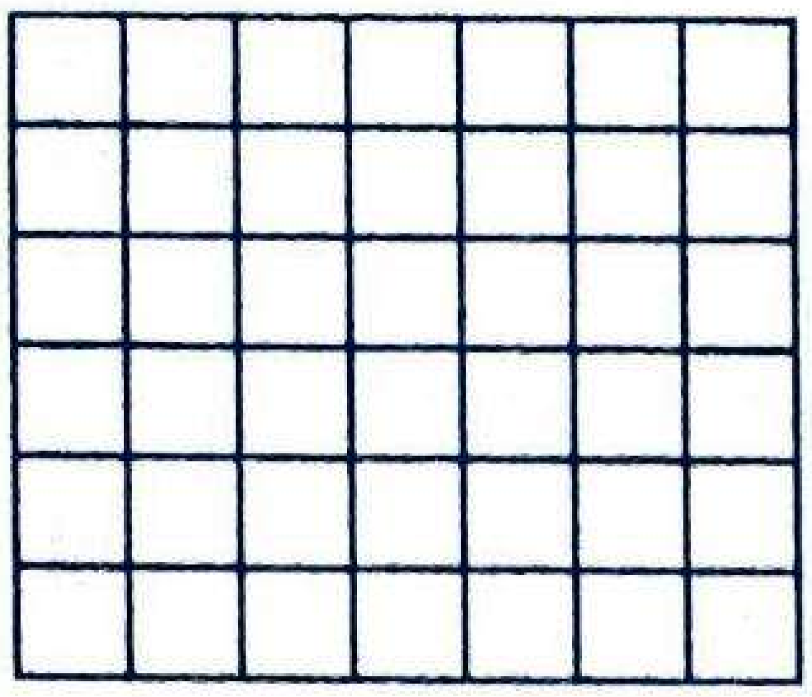








**6** **Break apart the following arrays using the distributive property Calculate the total area of each.**



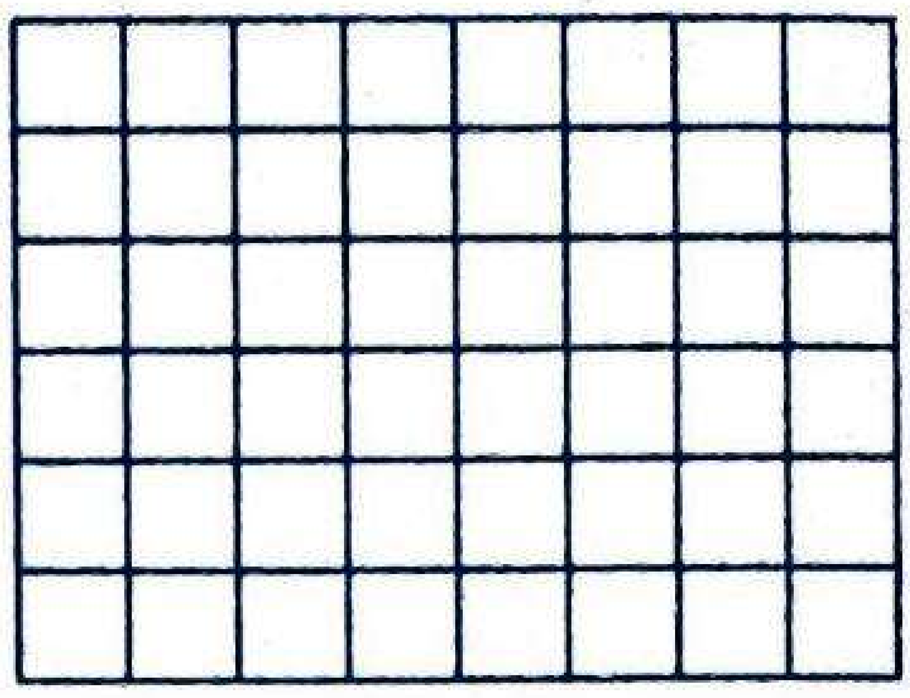
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$6 \times 7 =$ ◯

$6 \times 7 = (____ \times ____) + (____ \times ____)$



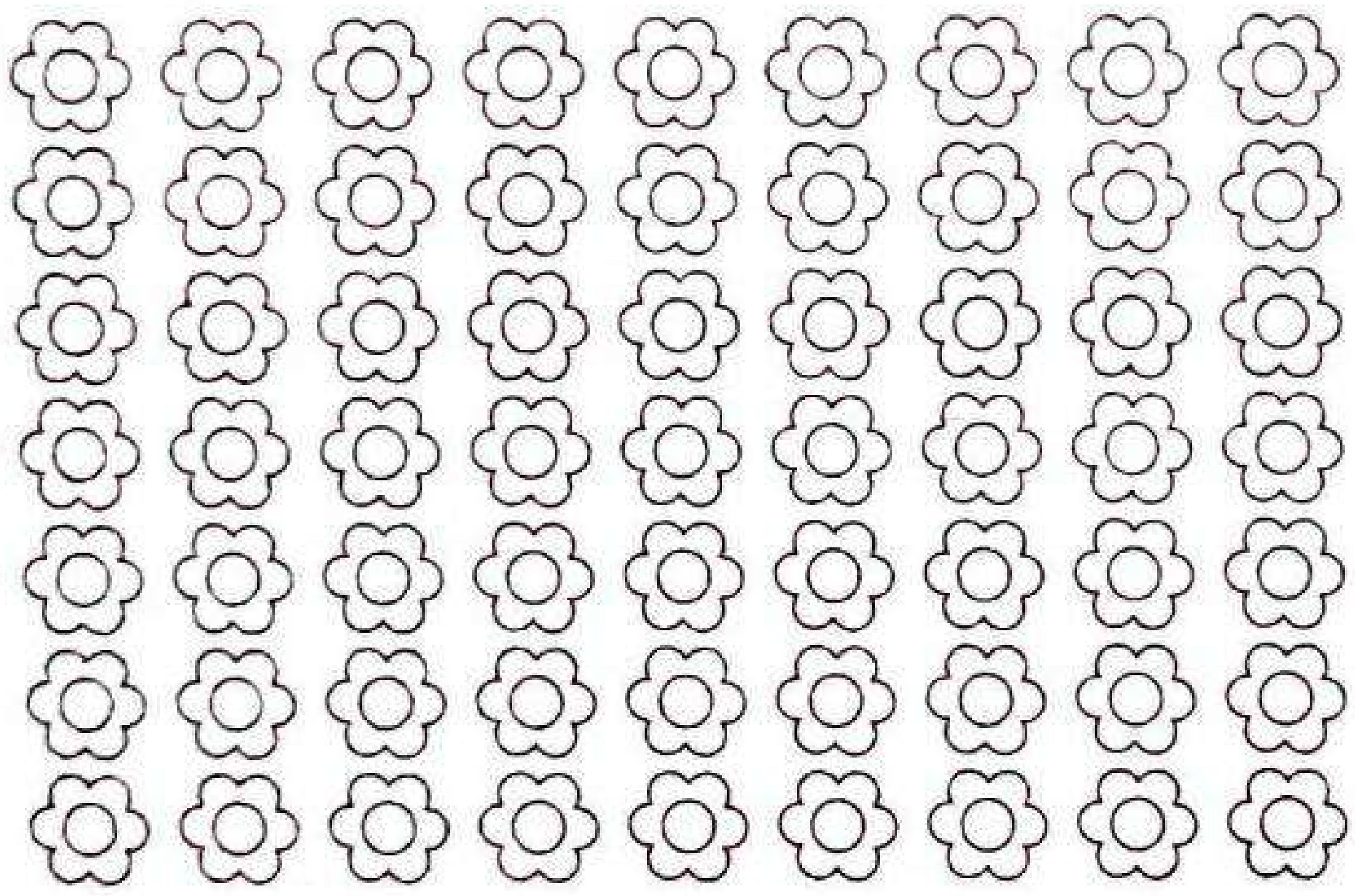
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$6 \times 8 =$ ◯

$6 \times 8 = (____ \times ____) + (____ \times ____)$



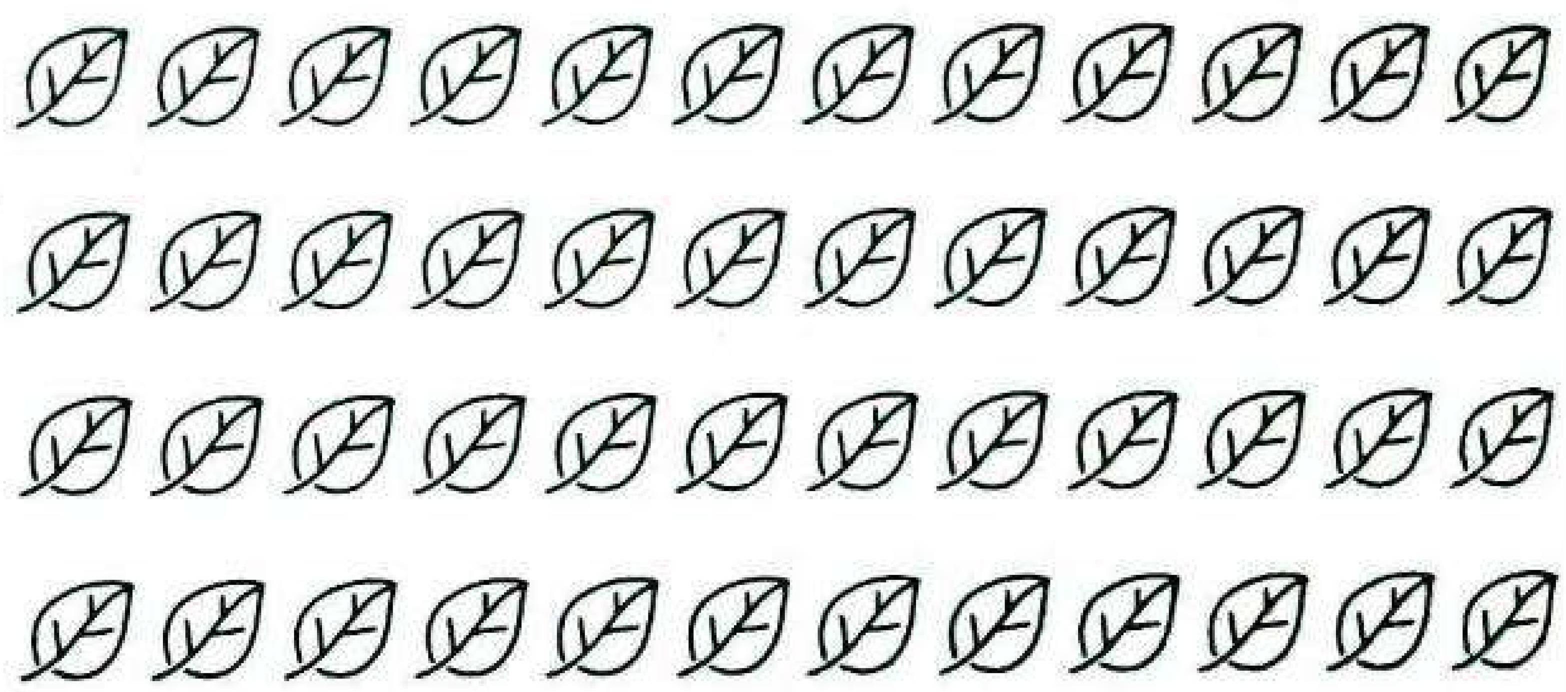
☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$7 \times 9 =$ ◯

$7 \times 9 = (____ \times ____) + (____ \times ____)$



☐ × ☐ = ☐

☐ × ☐ = ☐

☐ + ☐ = ◯

$4 \times 12 =$ ◯

$4 \times 12 = (____ \times ____) + (____ \times ____)$

# Assessment

## Chapter 4

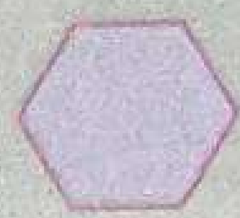


**1** Choose.

① Which of the following is not a polygon ?

◯ Square ◯ Circle ◯ Hexagon

② How many sides does this shape have ?

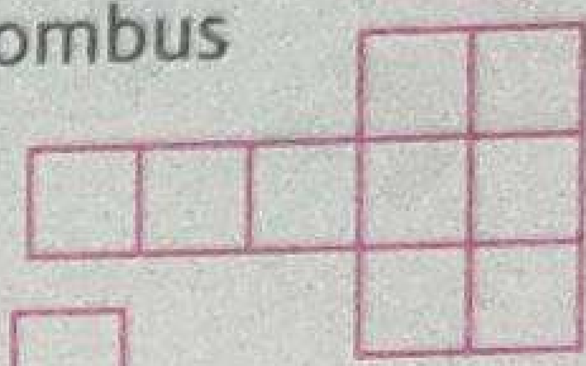


◯ 5 sides ◯ 6 sides ◯ 7 sides

③ Which of the following does not represent a parallelogram ?

◯ Square ◯ Trapezium ◯ Rhombus

④ The area of the opposite figure is ______

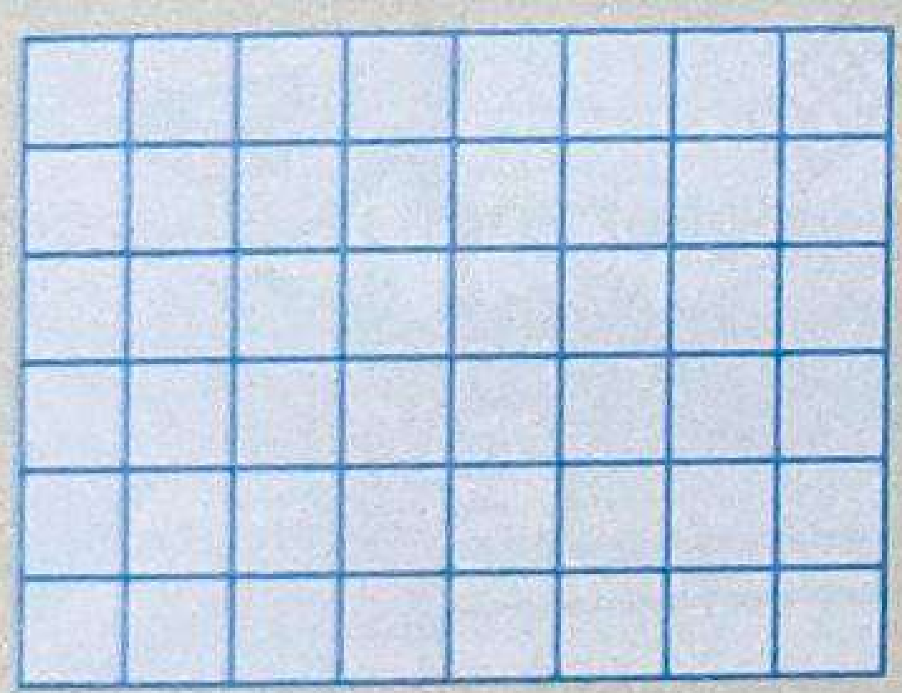


◯ 6 □ ◯ 9 □ ◯ 12 □

⑤ ______ = (4 × 4) + (4 × 5)

◯ 4 × 9 ◯ 4 × 6 ◯ 4 × 1

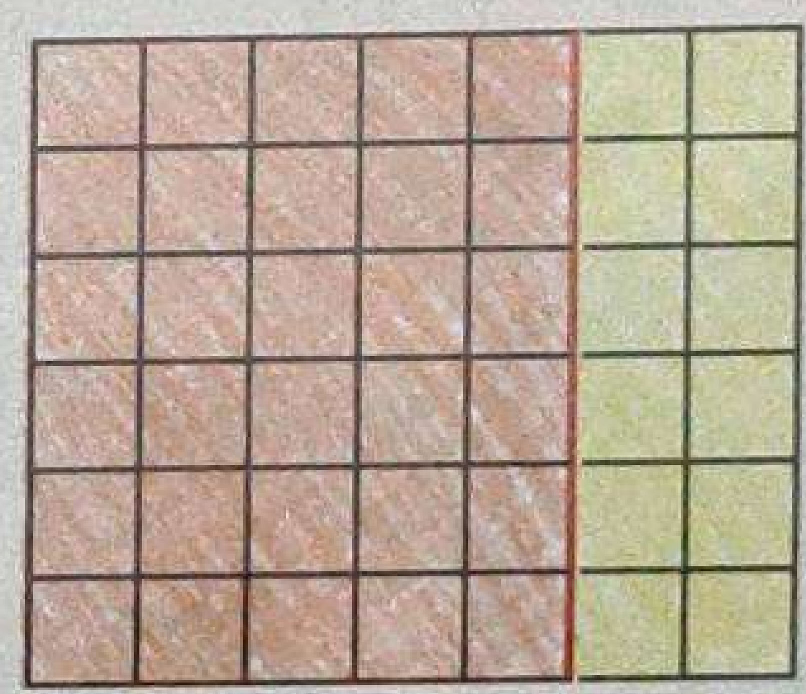
**2** Calculate the area of the figure.



Area = ____ × ____

= ____ square units

**3** Write the distributive property equation. Calculate the total area.



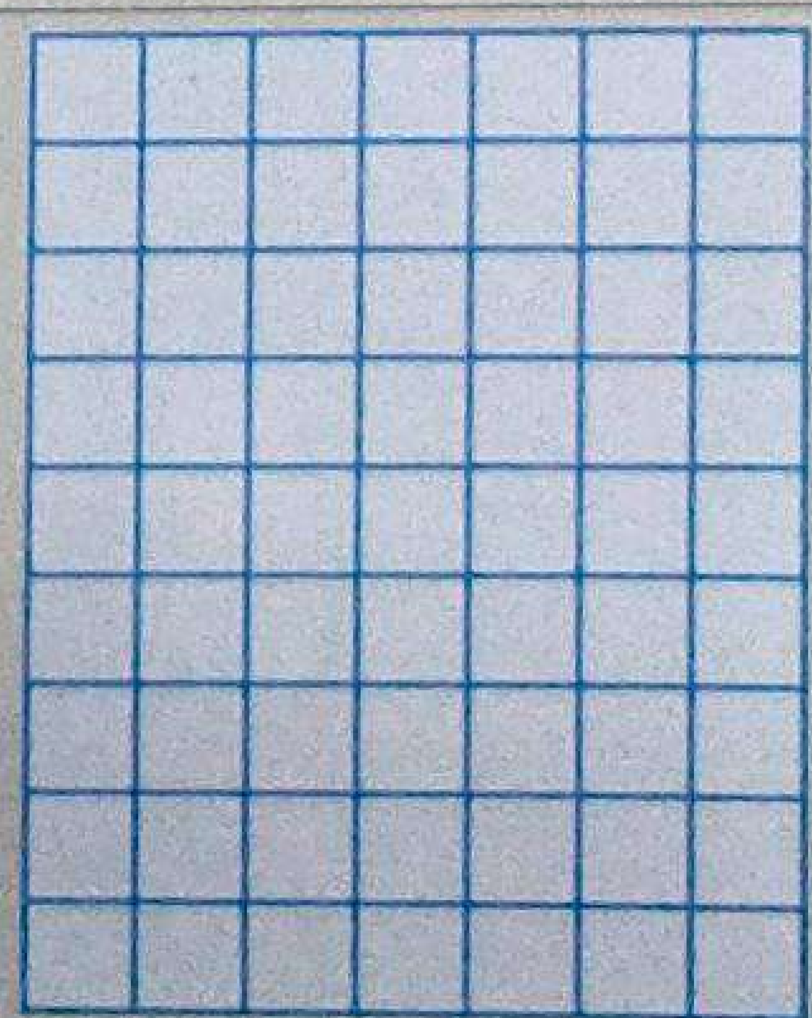
6 × 7 = ( ____ × ____ ) + ( ____ × ____ )

= ____ square units

**4** Yasseen loves peach and wants to plant it in his garden.

Peach needs 1 square unit of space.

He would like the garden to have 7 rows with 5 square units in each row. How many peach can Yassen fit in his garden ?



______________________________

What is the area of his garden in square units ?

______________________________

# Chapter 5




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## Outcomes

**At the end of chapter five, your child will be able to:**

### Lessons 41 to 43

- Measure the lengths of sides of polygons in centimeters.
- Define perimeter.
- Calculate the perimeters of polygons in centimeters.
- Explain why perimeter is a linear measurement.
- Distinguish between polygons and non-polygons.
- Describe practical applications for measuring perimeter.
- Estimate the perimeters of polygons in centimeters.
- Explain how to calculate perimeters of polygons.

### Lesson 44

- Explain the difference between perimeter and area.
- Calculate the perimeter and area of given arrays with some units missing.

### Lessons 45 & 46

- Explain why area is not a linear measurement.
- Calculate the area of a rectangle given only the length and width.
- Describe the problem-solving strategies they used to solve area problems.
- Apply a variety of strategies to solve area problems.
- Explain the strategies they used to solve area problems.

### Lessons 47 & 48

- Construct different rectangles with the same area.
- Compare the perimeters of rectangles with the same area but different dimensions.
- Construct different rectangles with the same perimeter.
- Compare the areas of rectangles with the same perimeter but different dimensions.

### Lesson 49

- Apply strategies to solve real-world area and perimeter problems.
- Apply his/her understanding of area and perimeter to write story problems.

### Lesson 50

- Multiply by 10 and multiples of 10.
- Identify and explain patterns observed when multiplying by 10s.

## Key vocabulary

- Polygon
- Quadrilateral
- Attribute
- Length
- Width
- Perimeter
- Linear measurement
- Centimeters (cm)
- Closed figure
- Open figure
- Actual
- Estimation
- Area
- Array
- Dimensions
- Square unit
- Product
- Factors
- Quotient
- Multiple
- Pattern
- Strategy



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Lessons

# 41 to 43 Perimeter of a polygon

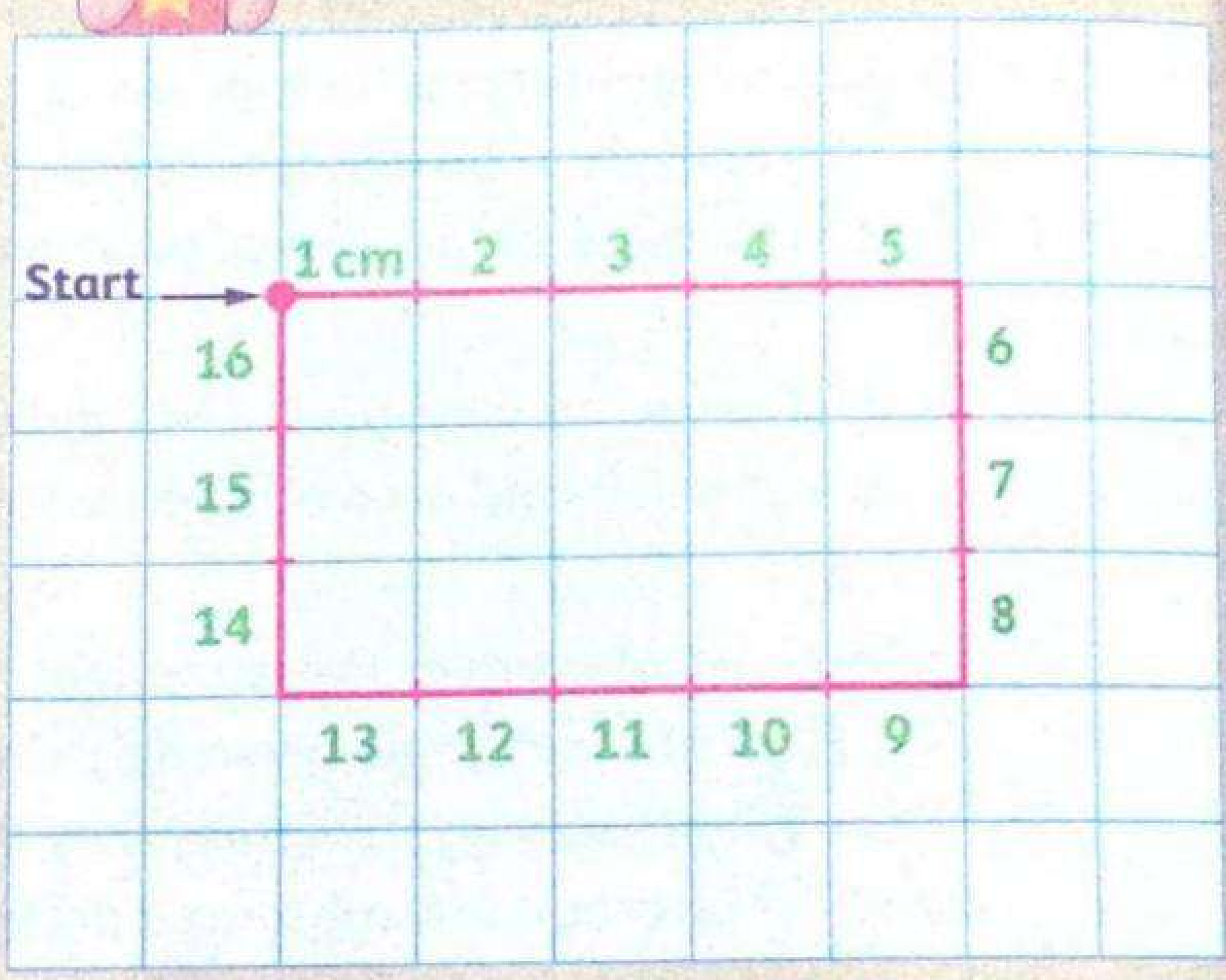
## Learn Perimeter



*Vocabulary*
*Perimeter*
*Distance around a figure or a polygon.*

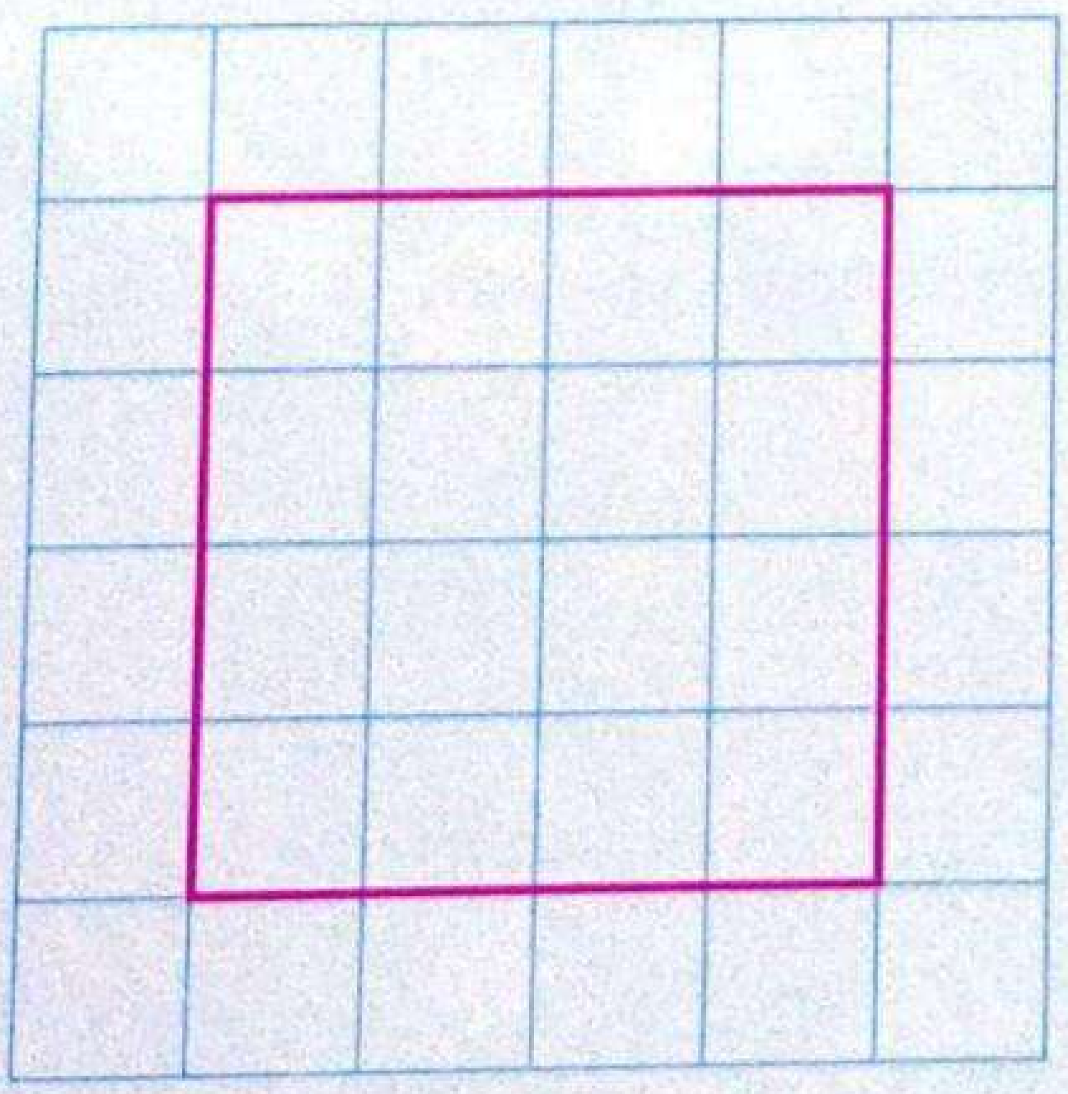
- You can use grid paper to find the distance around a figure.
- The distance around a polygon is called the perimeter.
- Count the units along the outside of the rectangle.

**The perimeter = 16 cm**

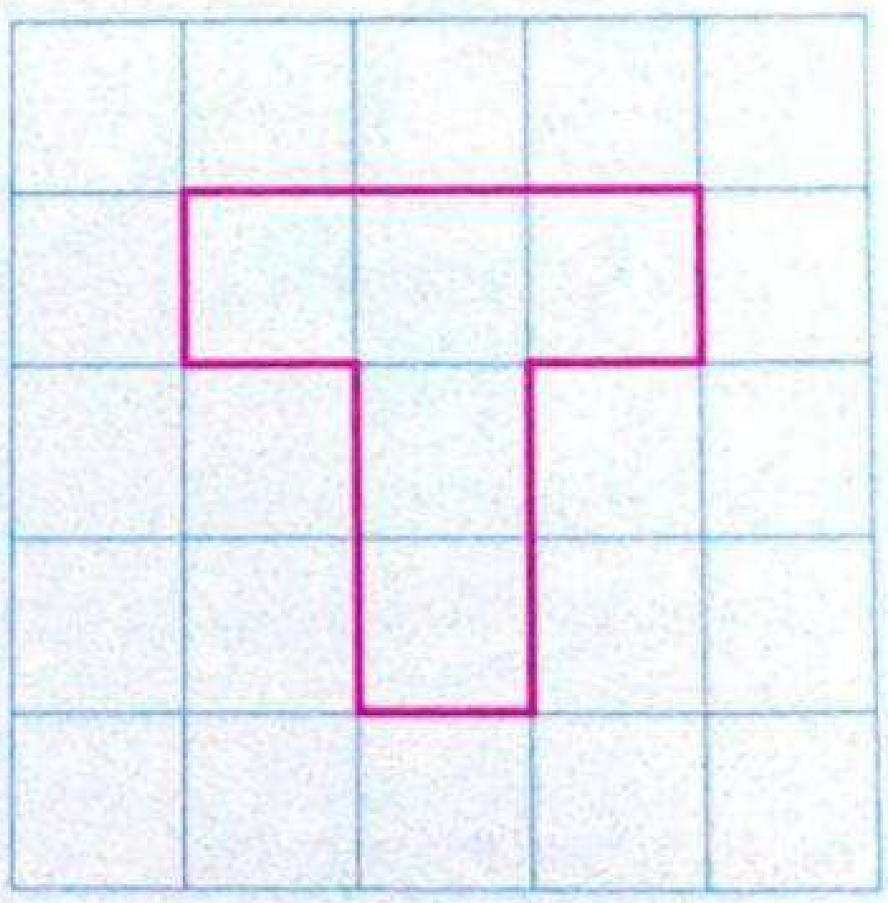



## Check

**Find the perimeter of each figure.**



- Perimeter = ____ cm.



- Perimeter = ____ cm.

**Notes for parents**

- Help your child to find the perimeter of each figure.

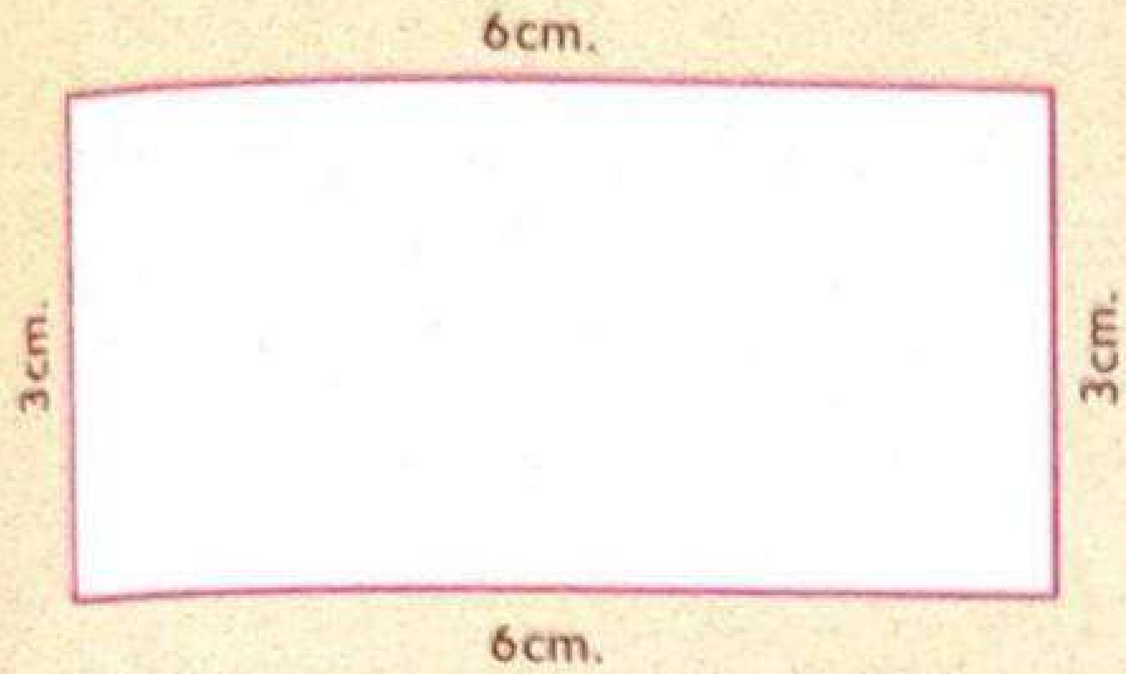



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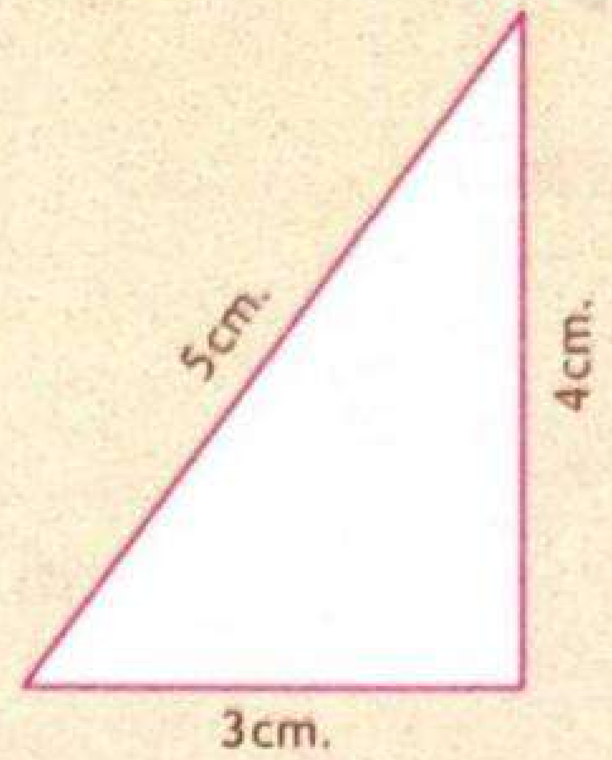
## Learn Perimeter of a polygon



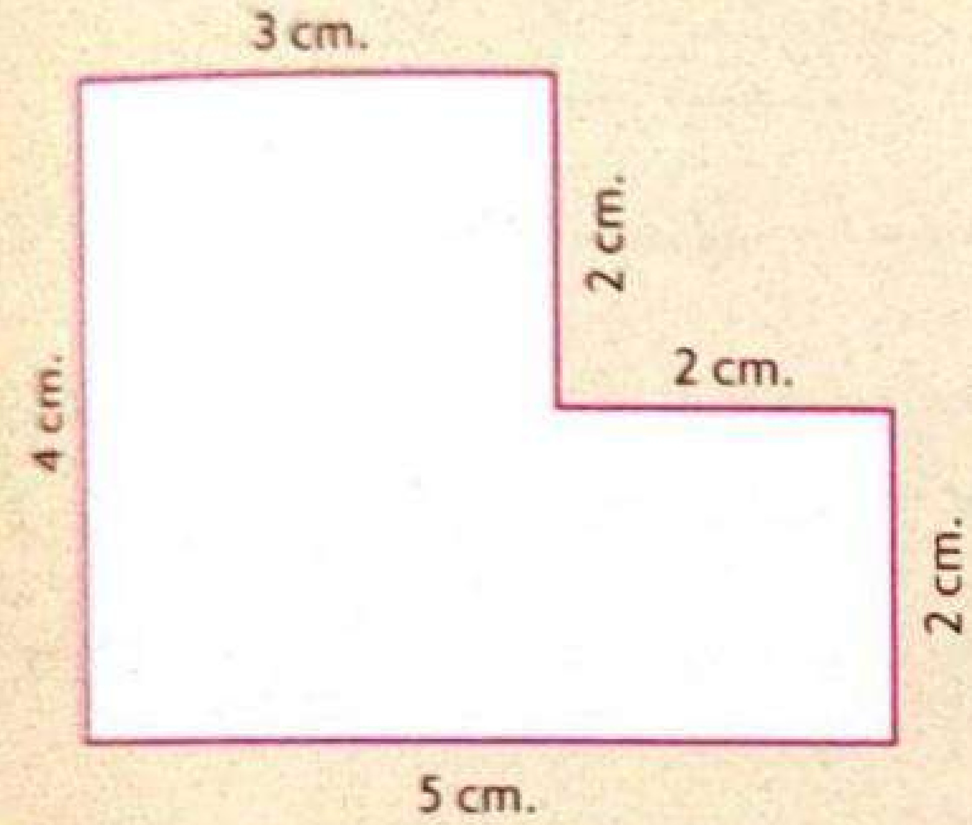
The distance around a figure or a polygon is its perimeter.




Perimeter = 6 + 3 + 6 + 3 = 18 cm




Perimeter = 3 + 4 + 5 = 12 cm




Perimeter = 3 + 2 + 2 + 2 + 5 + 4 = 18 cm

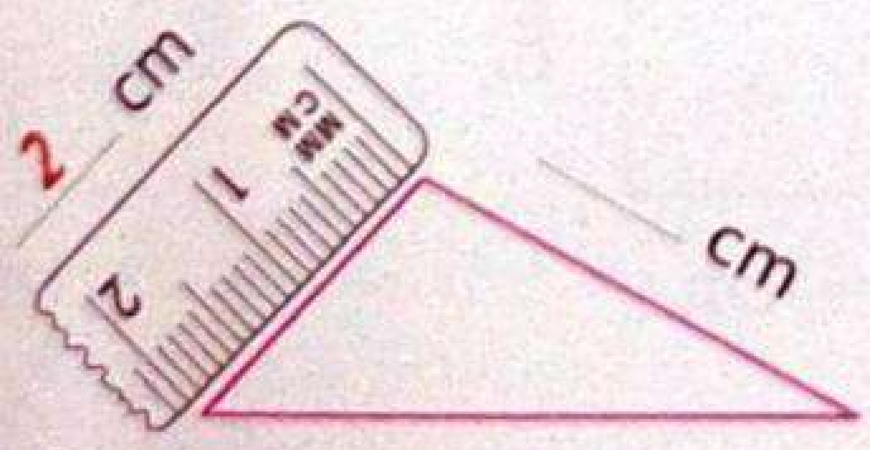
## Check



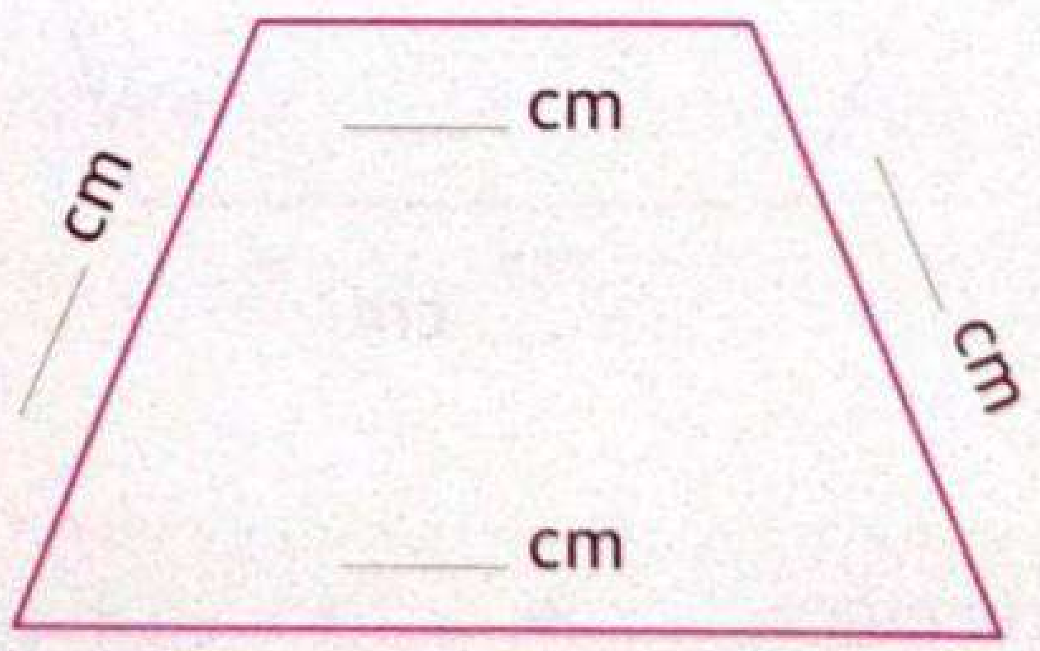
*Math tip*

*Measuring length in one direction as length, width, distance between the endpoints of a side in a polygon is called linear measurement.*

**Measure each side. Add to find the perimeter.**




Perimeter = ___ + ___ + ___ = ___ cm.




Perimeter = ___ + ___ + ___ + ___ = ___ cm.

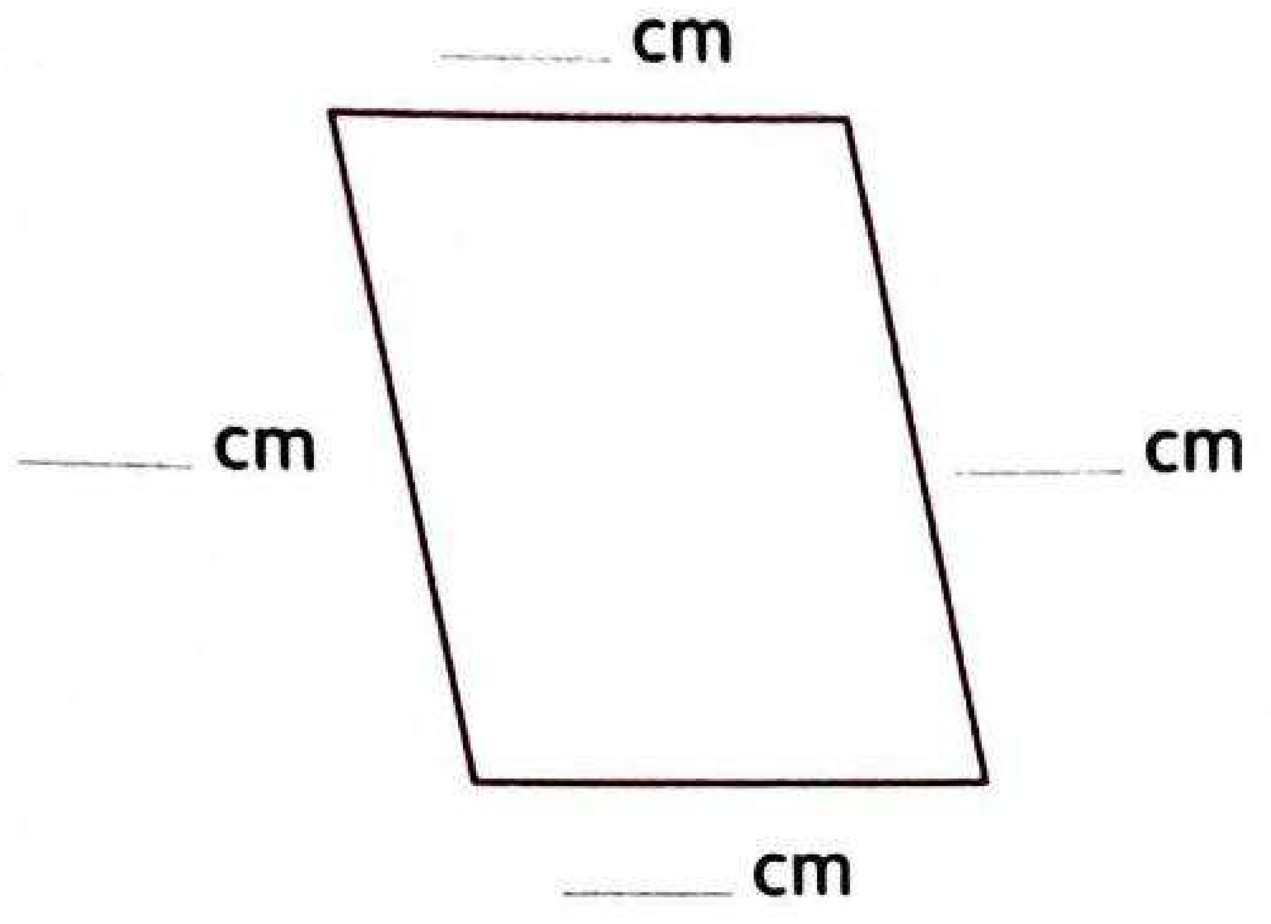
• Let your child use a centimeter ruler to measure the perimeter of a book.




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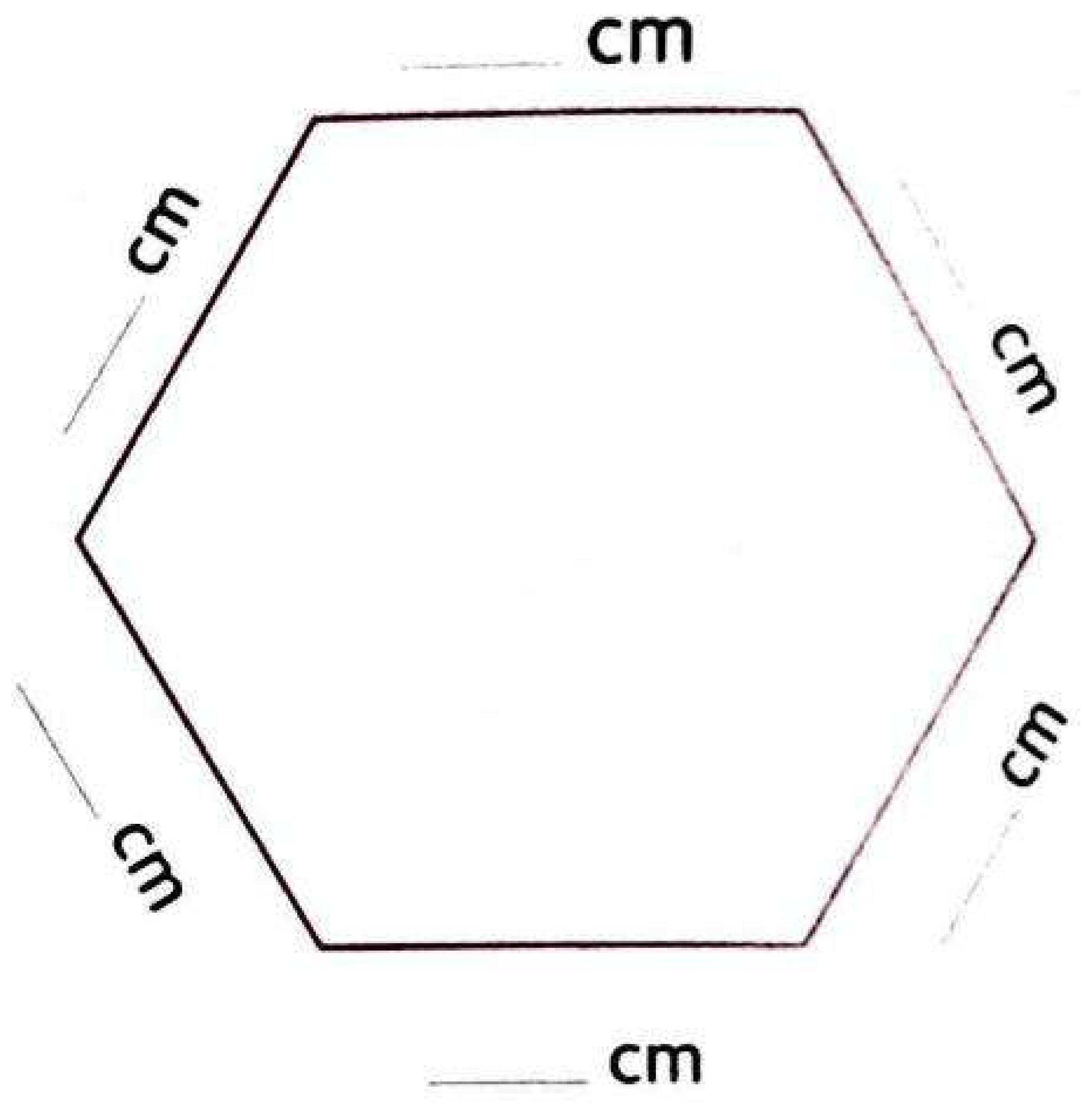
## Practice

Measure each side and find the perimeter of each polygon.
Color the polygon with the greatest perimeter in red.



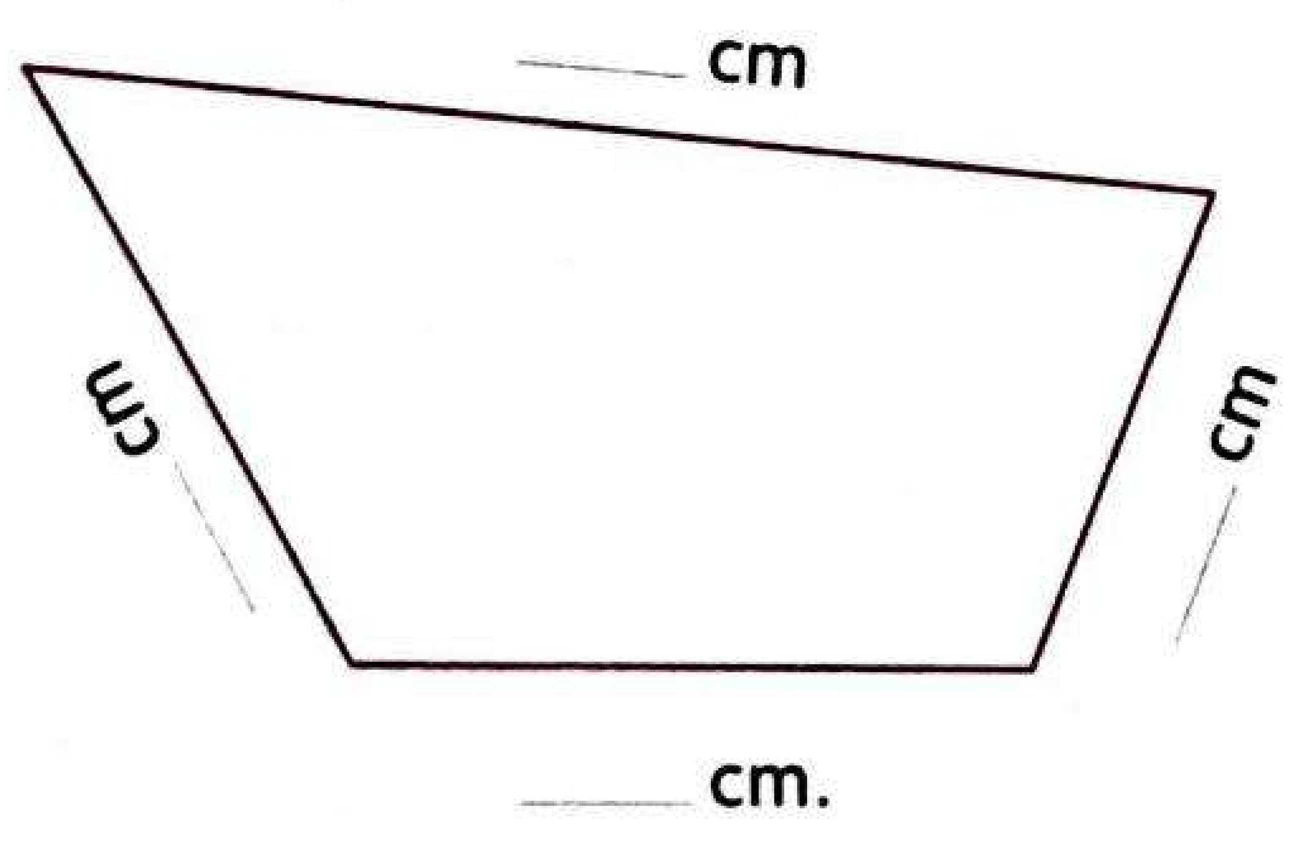

Perimeter = ___ + ___ + ___ + ___

= ___ cm.



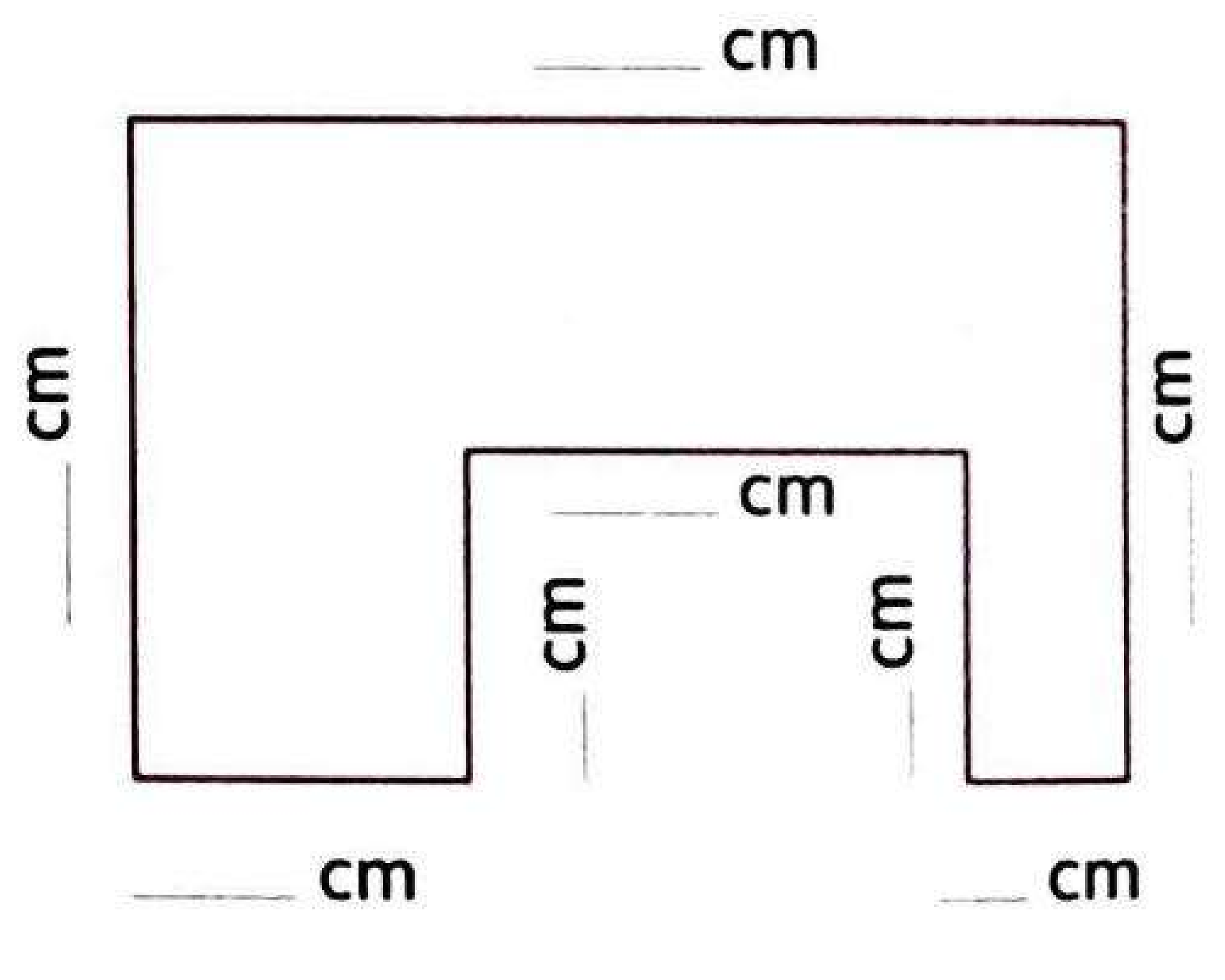

Perimeter = ___ + ___ + ___ + ___

+ ___ + ___ = ___ cm.




Perimeter = ___ + ___ + ___ + ___

= ___ cm.




Perimeter = ___ + ___ + ___ + ___

+ ___ + ___ + ___ + ___ = ___ cm.

**Notes for parents**

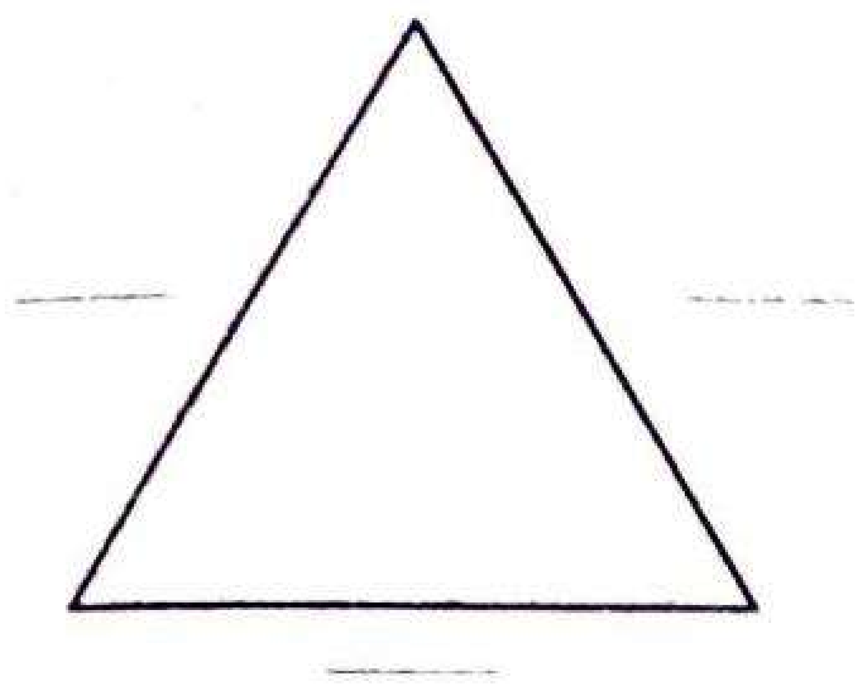
• Help your child to use a ruler to measure the side lengths.





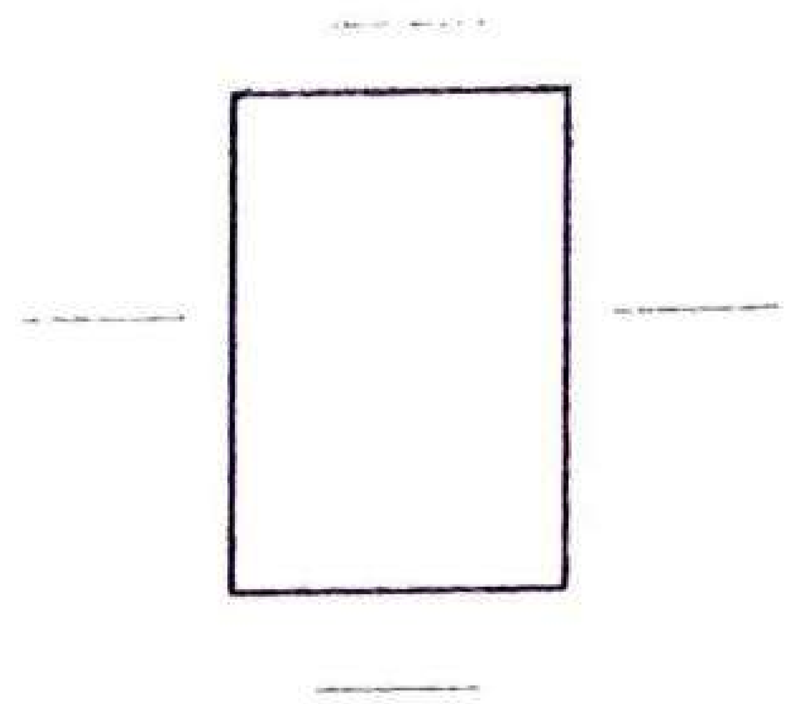

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Calculate the perimeter of each polygon in centimeters. Then name the polygon with the smallest perimeter.



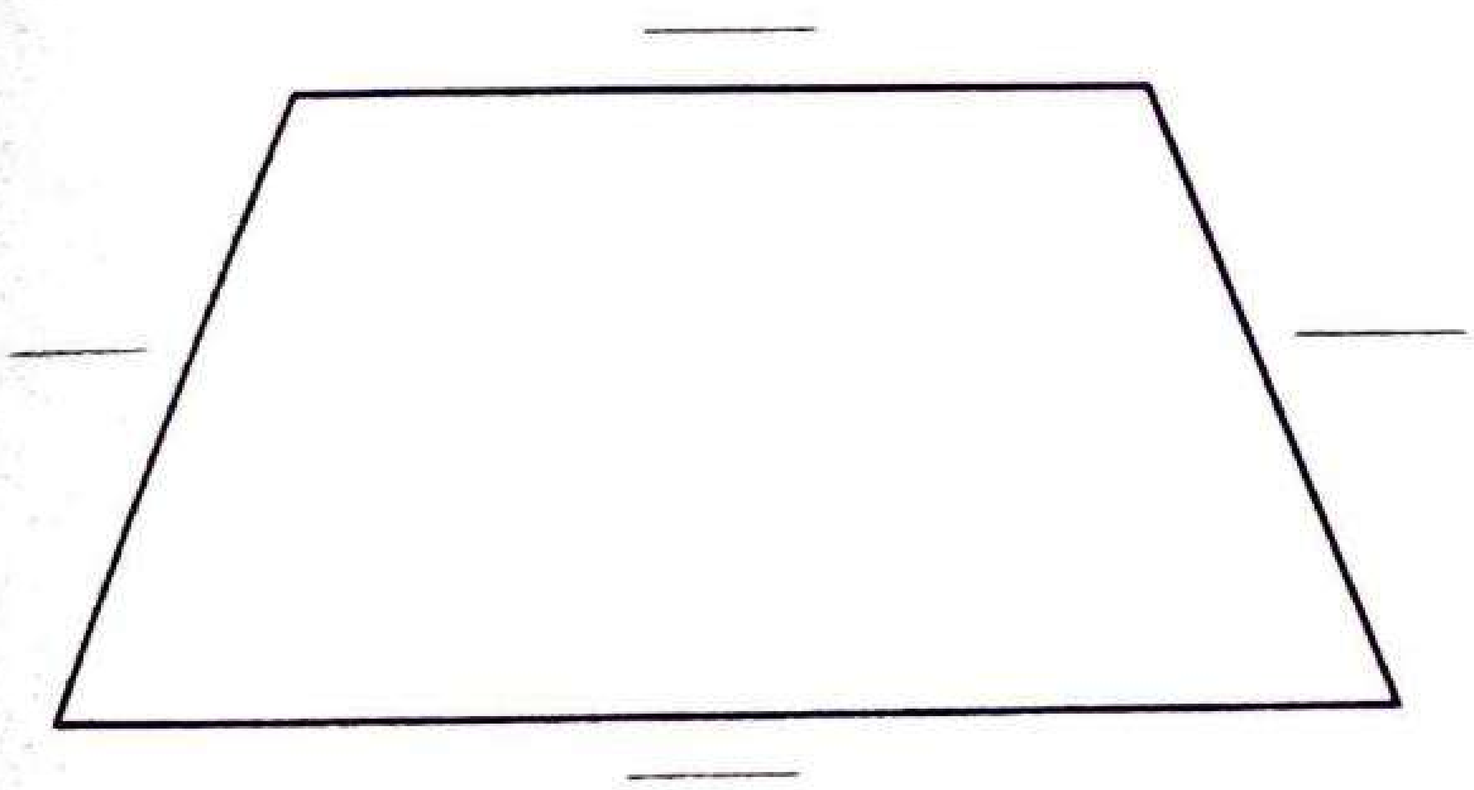
Perimeter = ____ + ____ + ____

= ____ cm.



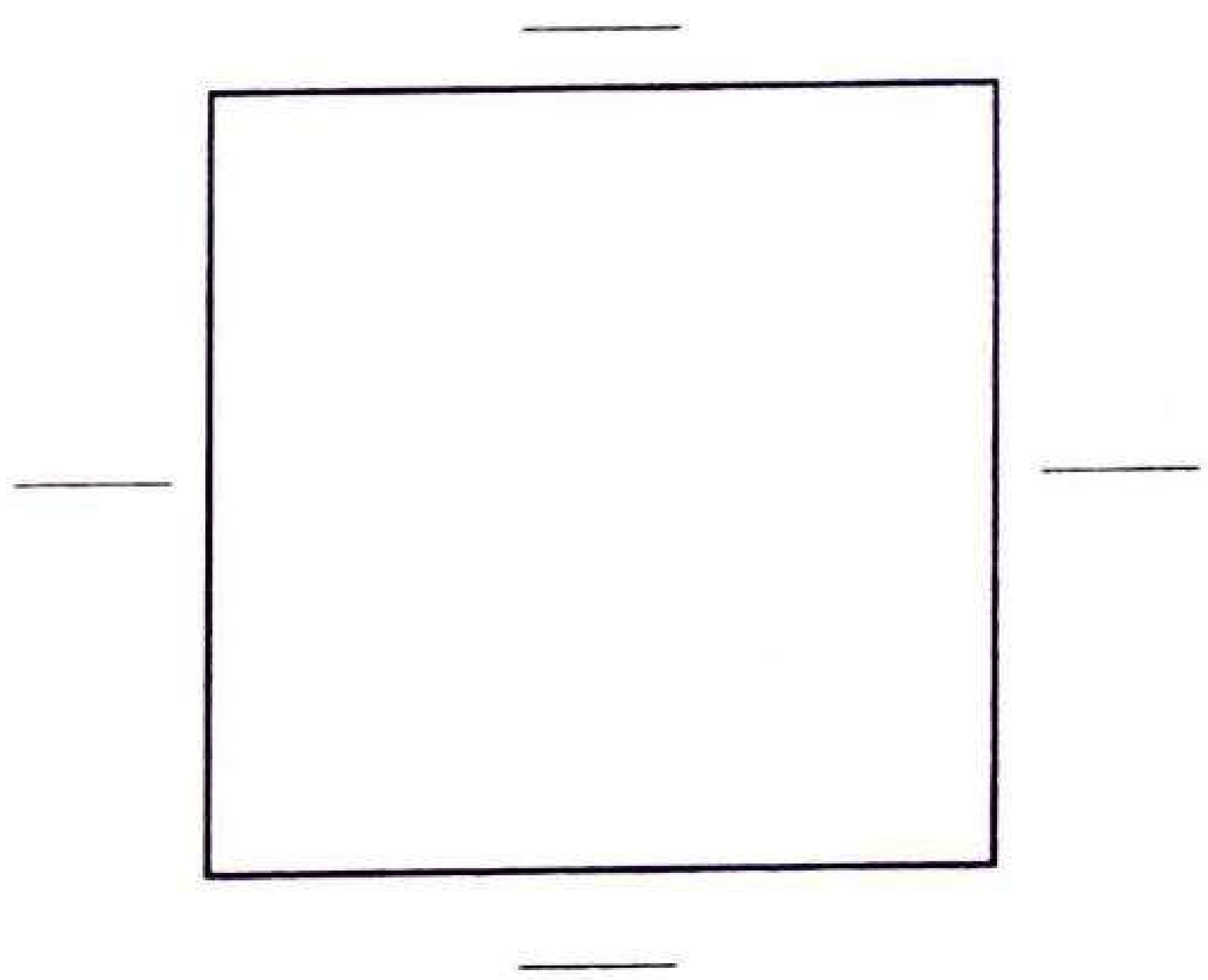
Perimeter = ____ + ____ + ____ + ____

= ____ cm.



Perimeter = ____ + ____ + ____ + ____

= ____ cm.



Perimeter = ____ + ____ + ____ + ____

= ____ cm.

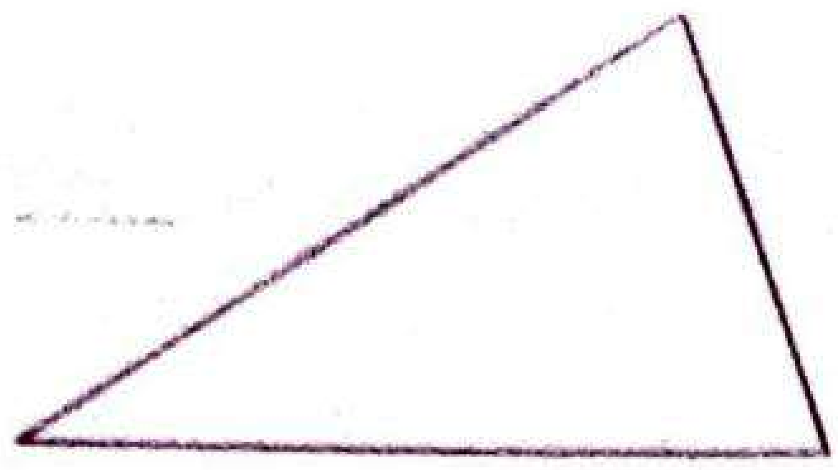
The polygon with the smallest perimeter is ____________________



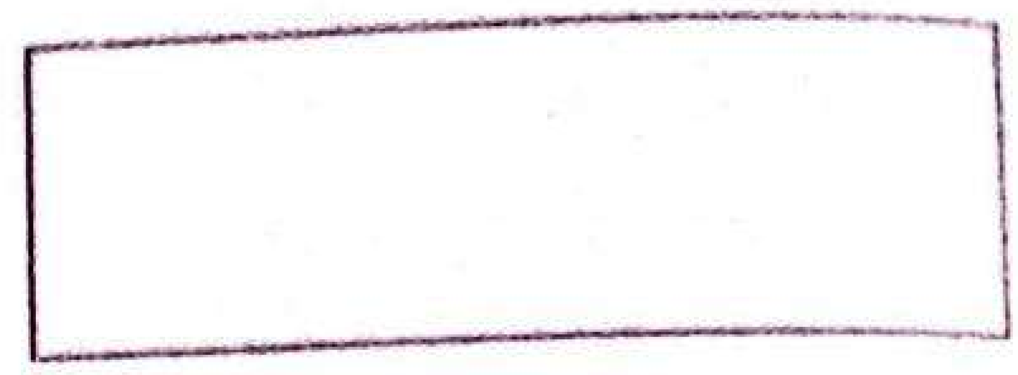


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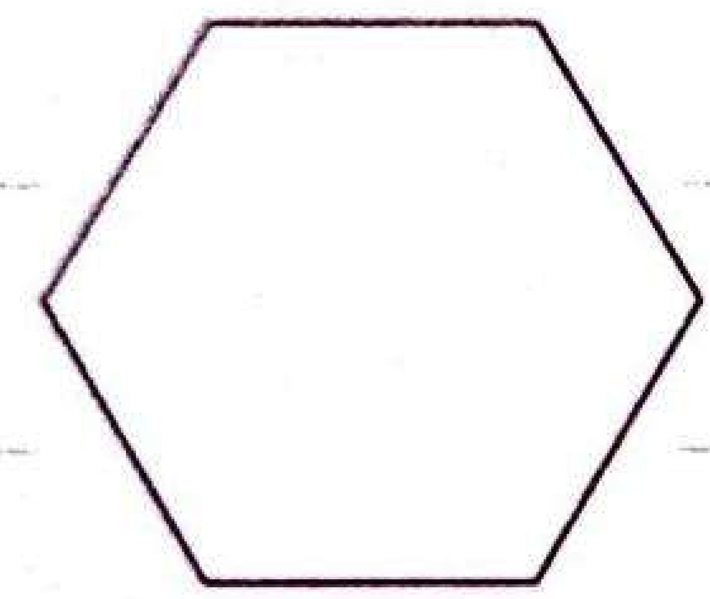
Find the perimeter of each of the following polygons.
Then color the polygons with the same perimeter in the same color.



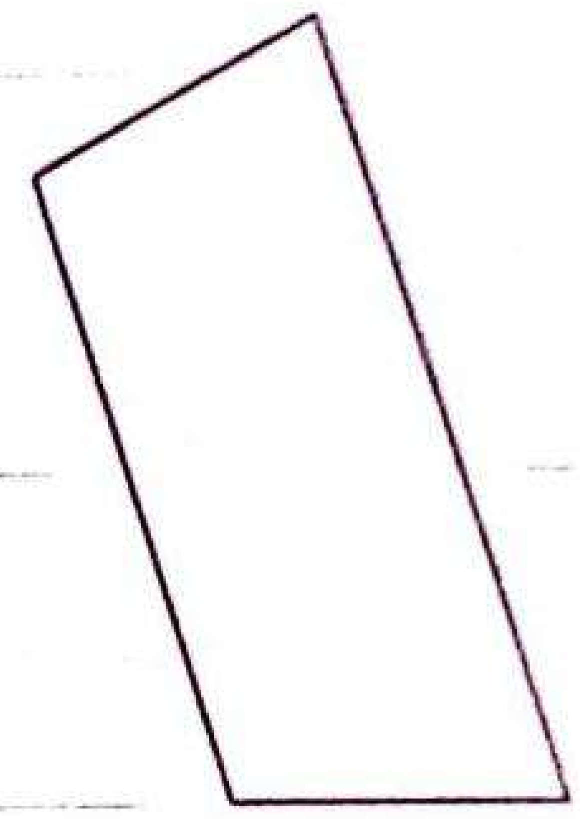
Perimeter = ____ + ____ + ____
= ____ cm.



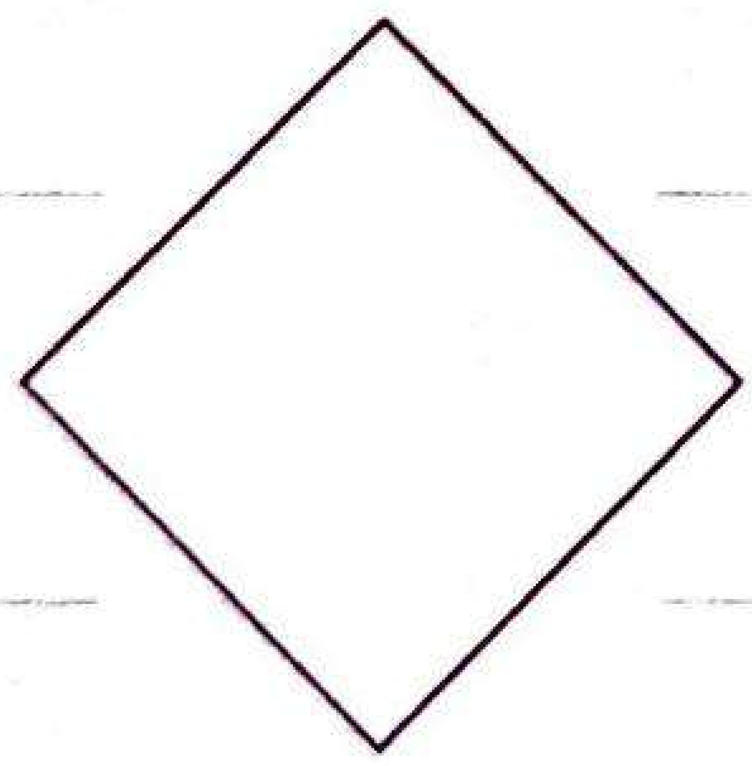
Perimeter = ____ + ____ + ____ + ____
= ____ cm.



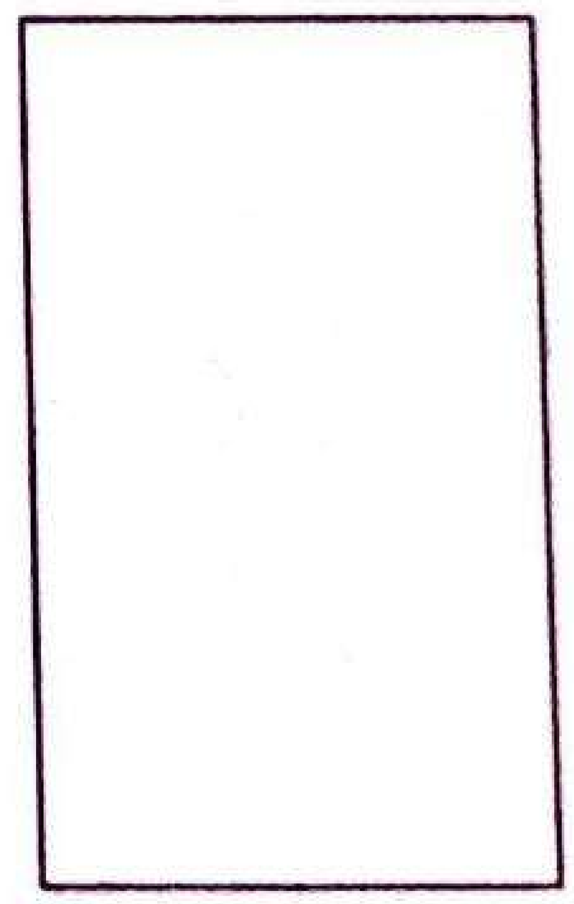
Perimeter = ____ + ____ + ____ + ____
+ ____ + ____ = ____ cm.



Perimeter = ____ + ____ + ____ + ____
= ____ cm.



Perimeter = ____ + ____ + ____ + ____
= ____ cm.



Perimeter = ____ + ____ + ____ + ____
= ____ cm.

**Notes for parents**

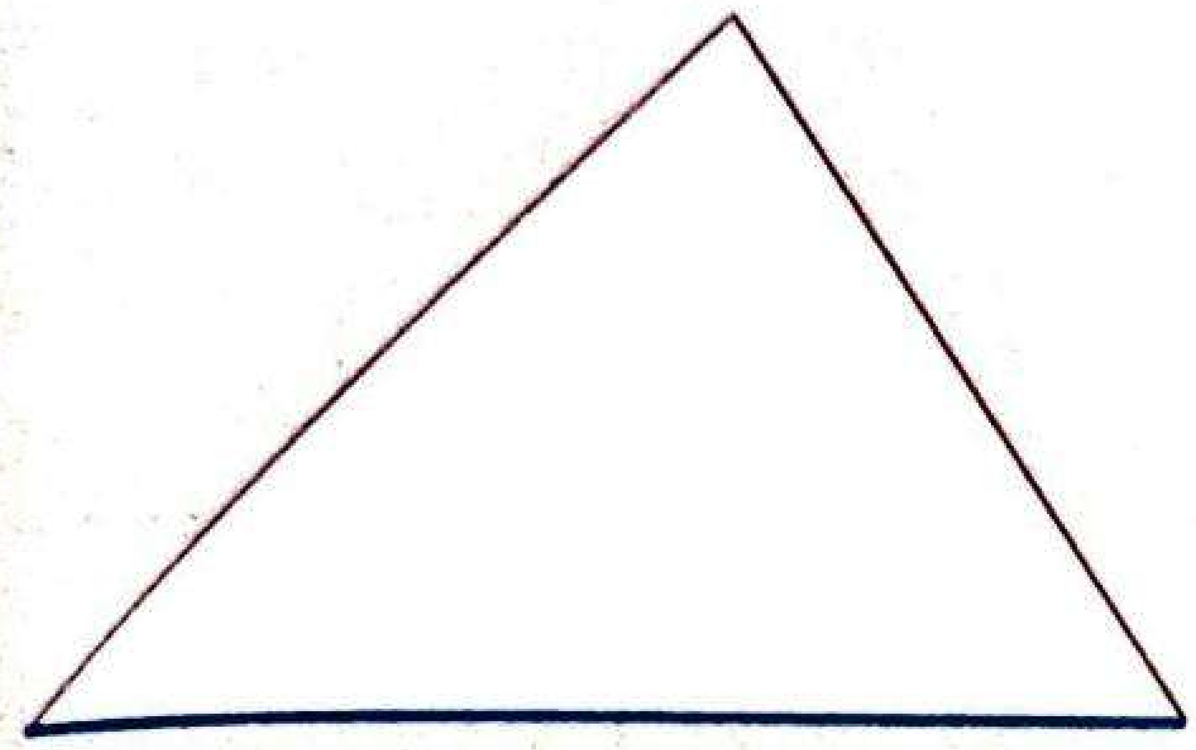
- Ask your child to put a ribbon around his/her picture. Then measure the length of the ribbon to fi[nd the] perimeter of the picture.




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## Learn  Estimating the side length

- How long is the blue side ?



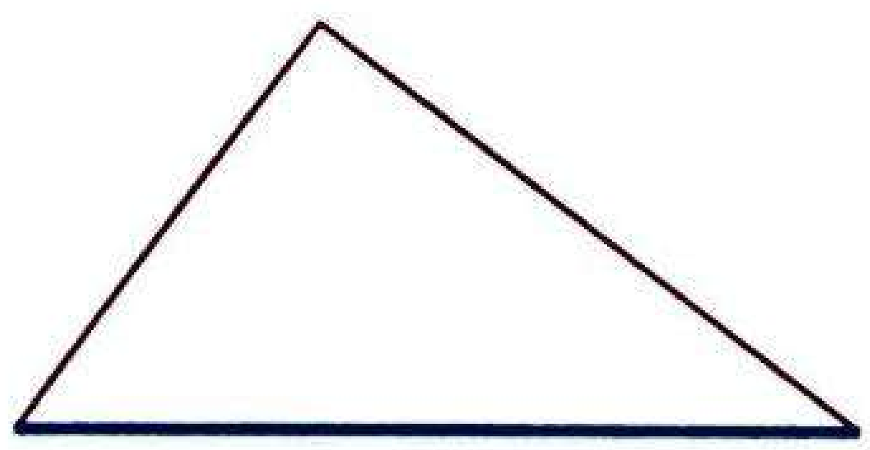
An estimation is what I think it will measure. I can measure with a centimeter.

| Estimate | Measure |
|---|---|
| about 6 cm | 7 cm |

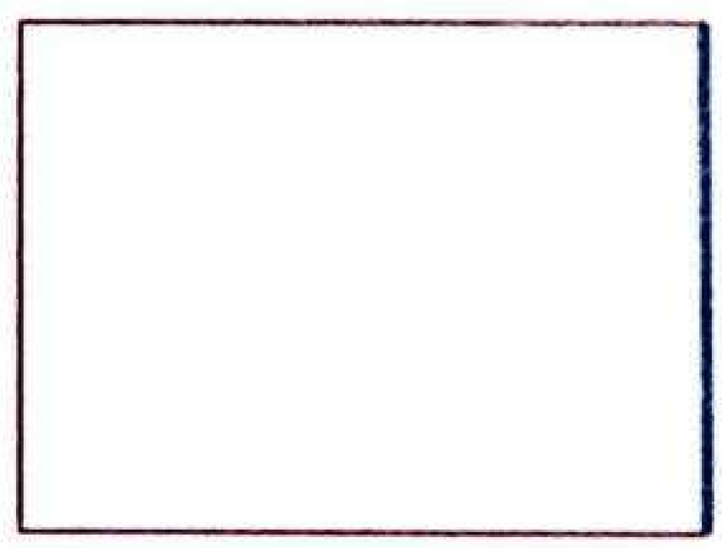


## Check

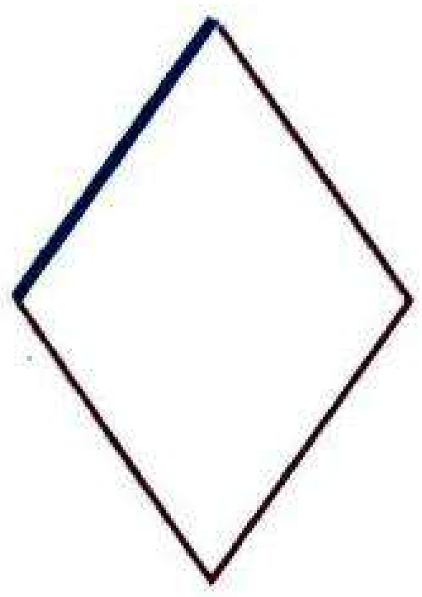
Estimate the length of the blue side.
Then use a ruler to measure it in centimeters.



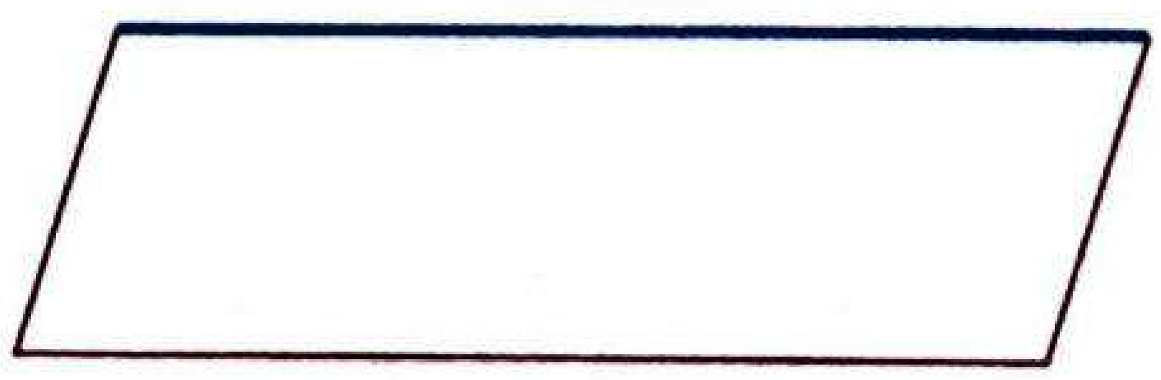
| Estimate | about ____ cm |
|---|---|
| Measure | ____ cm |



| Estimate | about ____ cm |
|---|---|
| Measure | ____ cm |



| Estimate | about ____ cm |
|---|---|
| Measure | ____ cm |



| Estimate | about ____ cm |
|---|---|
| Measure | ____ cm |

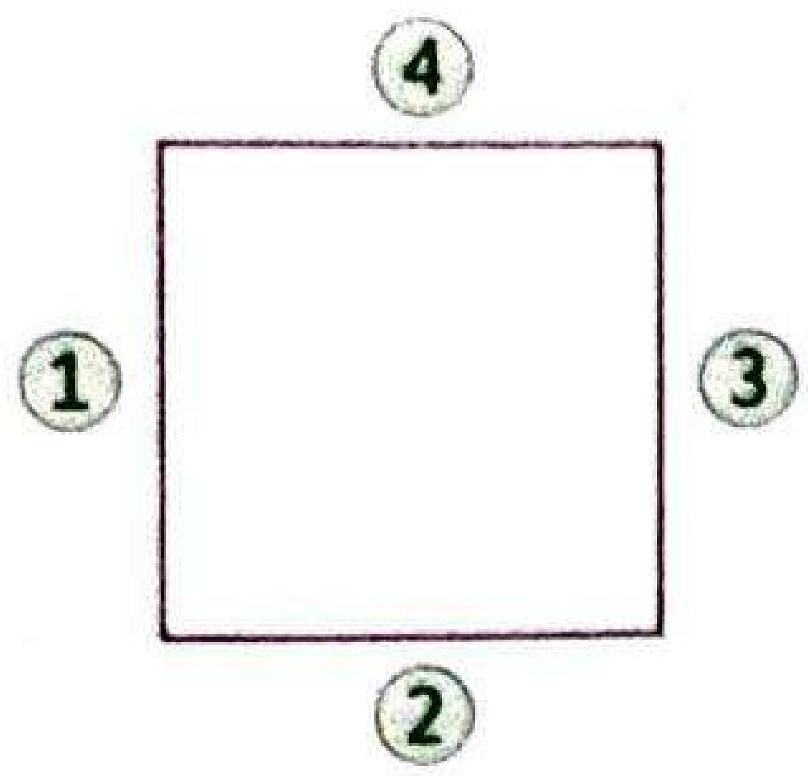
- Make sure that your child measure the side lengths accurately.




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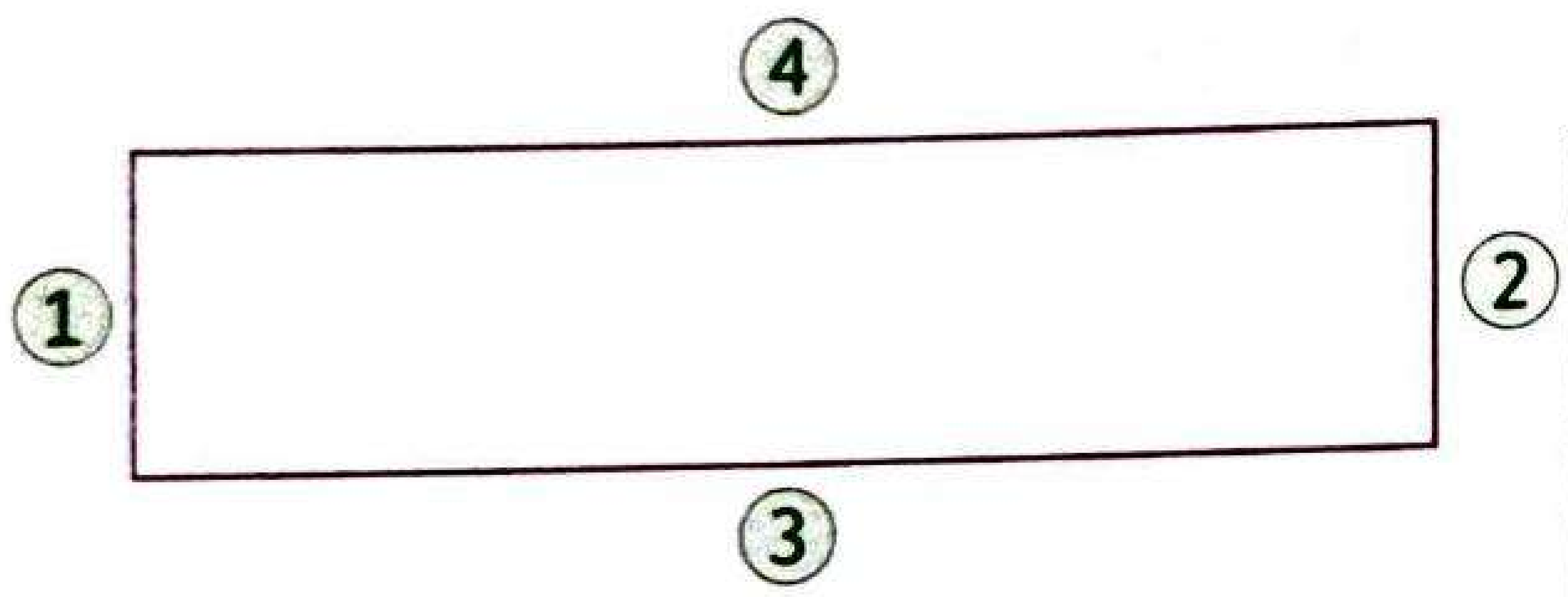
## Practice

Estimate. Then use a ruler to measure in centimeters.



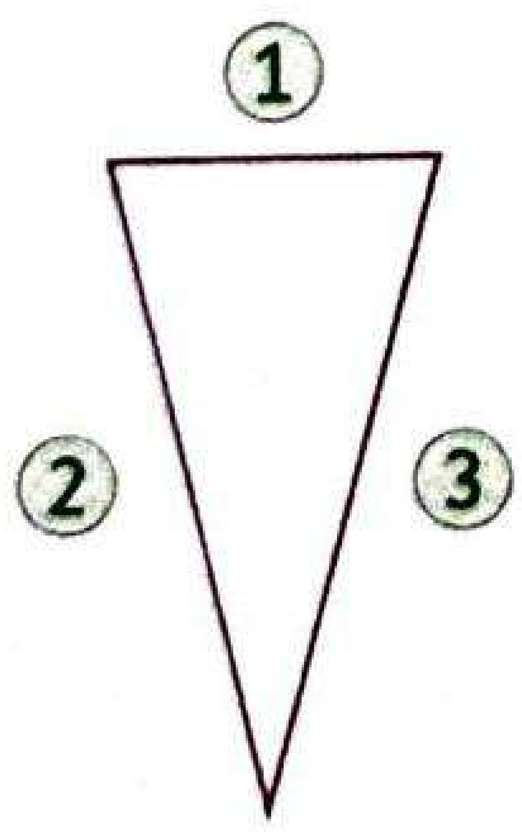

| | Side 1 | Side 2 | Side 3 | Side 4 | Per. |
|---|---|---|---|---|---|
| Estimate | | | | | |
| Measure | | | | | |

**Choose :** Your estimation is : ☐ accepted ☐ not accepted




| | Side 1 | Side 2 | Side 3 | Side 4 | Per. |
|---|---|---|---|---|---|
| Estimate | | | | | |
| Measure | | | | | |

**Choose :** Your estimation is : ☐ accepted ☐ not accepted




| | Side 1 | Side 2 | Side 3 | Per. |
|---|---|---|---|---|
| Estimate | | | | |
| Measure | | | | |

**Choose :** Your estimation is : ☐ accepted ☐ not accepted

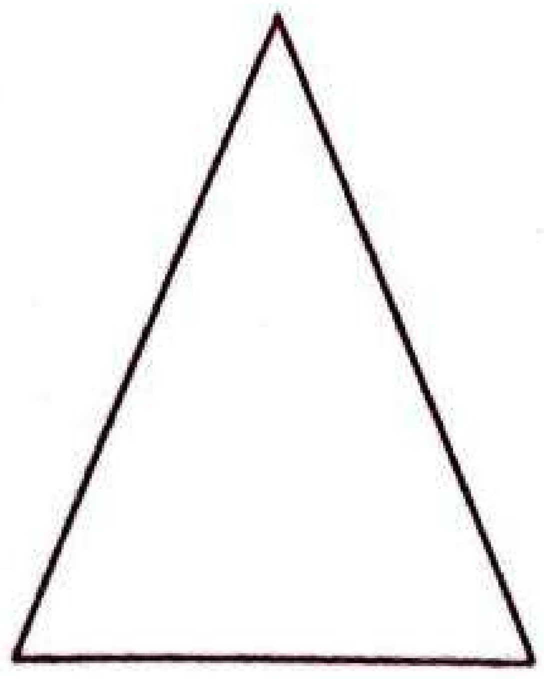
**Notes for parents**

- Talk with your child about his/her estimations.

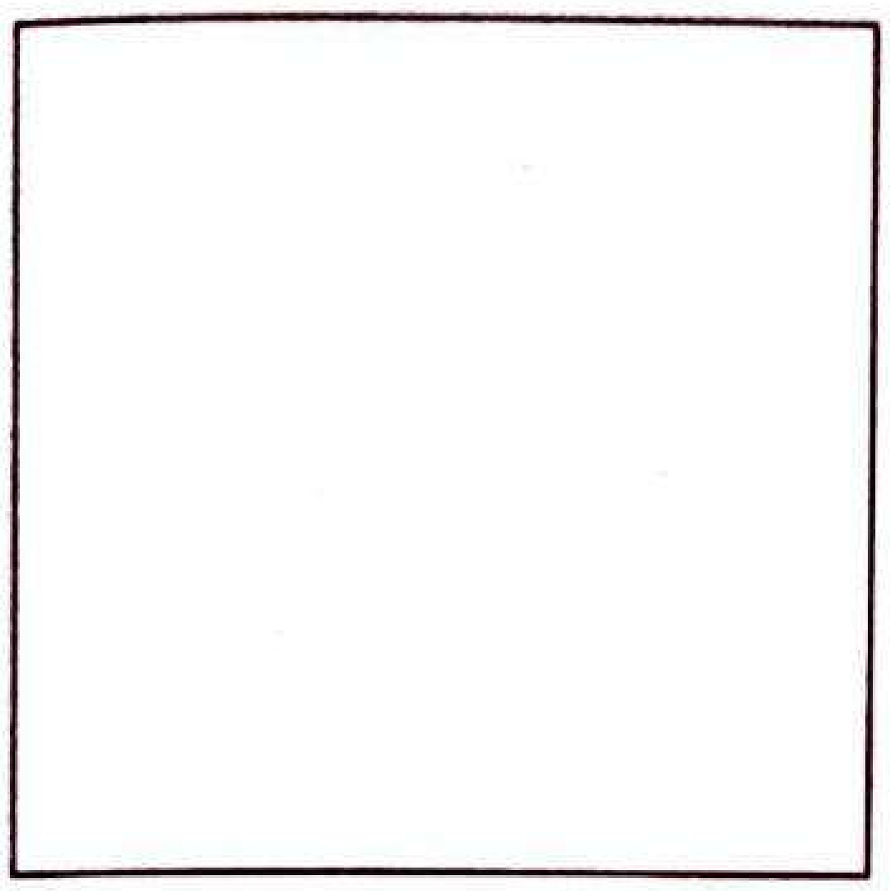



Scanned by TapScanner

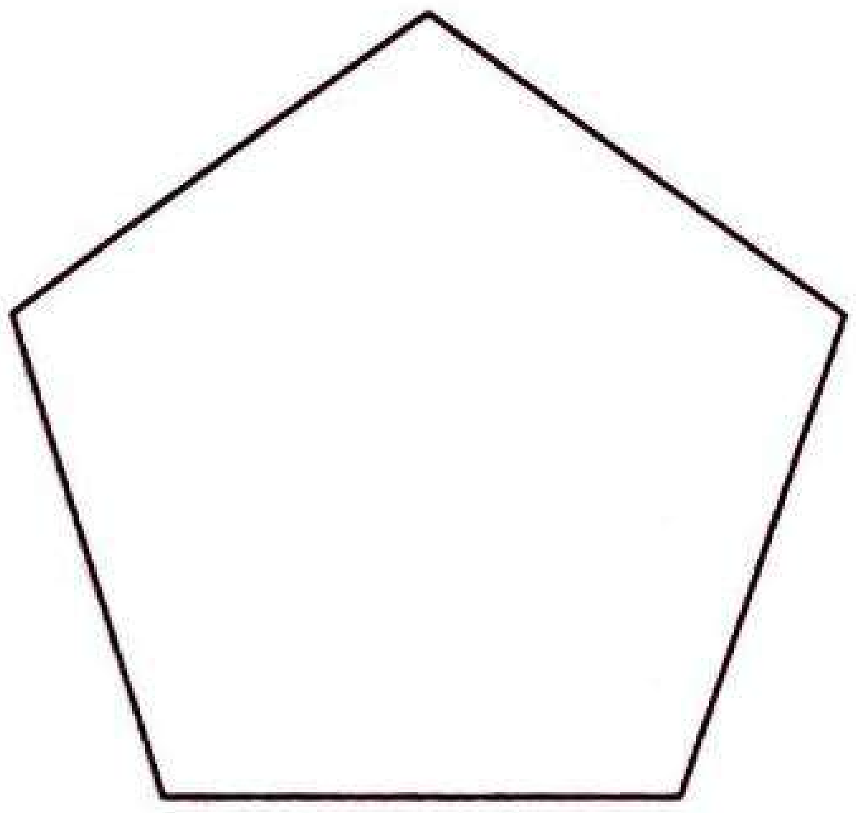
Estimate the perimeter of each of the following polygons. Then find the actual perimeter in centimeters.



| | Perimeter |
|---|---|
| Estimate | about ____ cm |
| Measure | ____ cm |



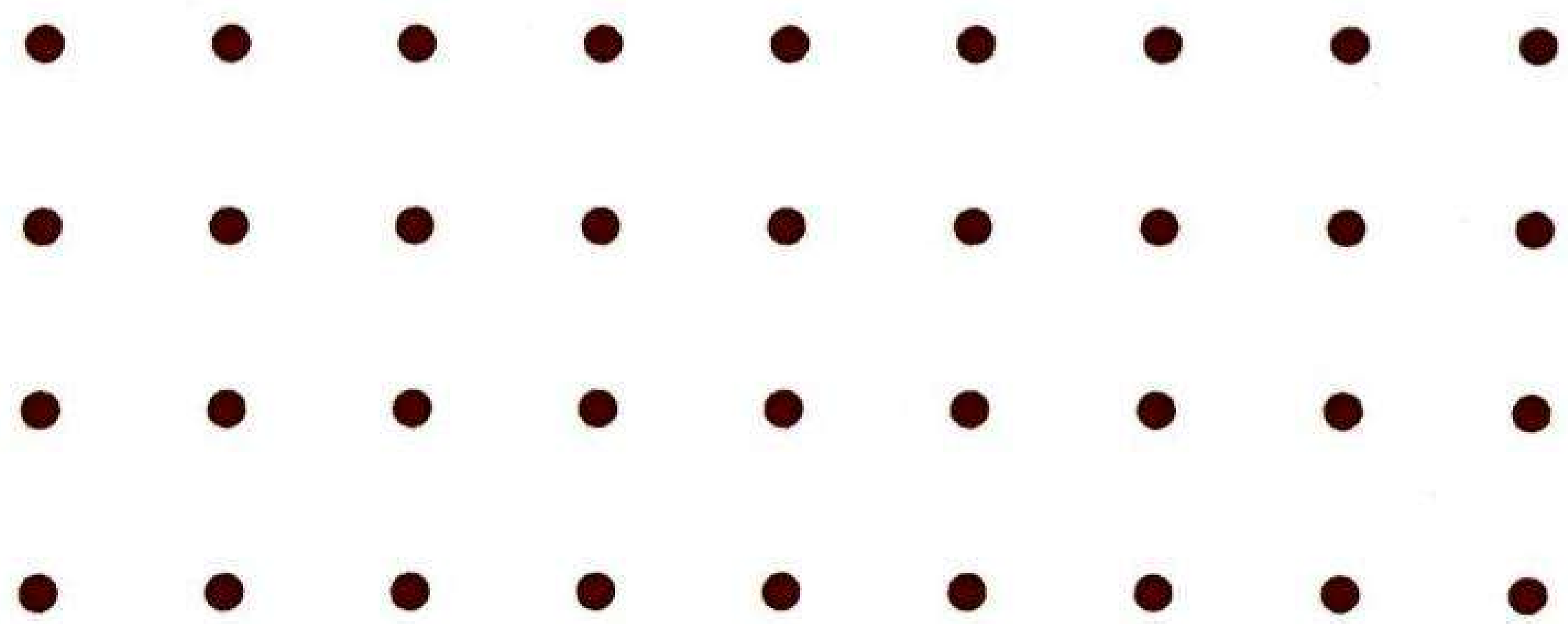
| | Perimeter |
|---|---|
| Estimate | about ____ cm |
| Measure | ____ cm |



| | Perimeter |
|---|---|
| Estimate | about ____ cm |
| Measure | ____ cm |

## Challenge

- Use a ruler to draw a rectangle with a perimeter of 10 centimeters.



• Ask your child to show you a rectangular shape in your home and estimate its perimeter and measure it.

Place a smiley face



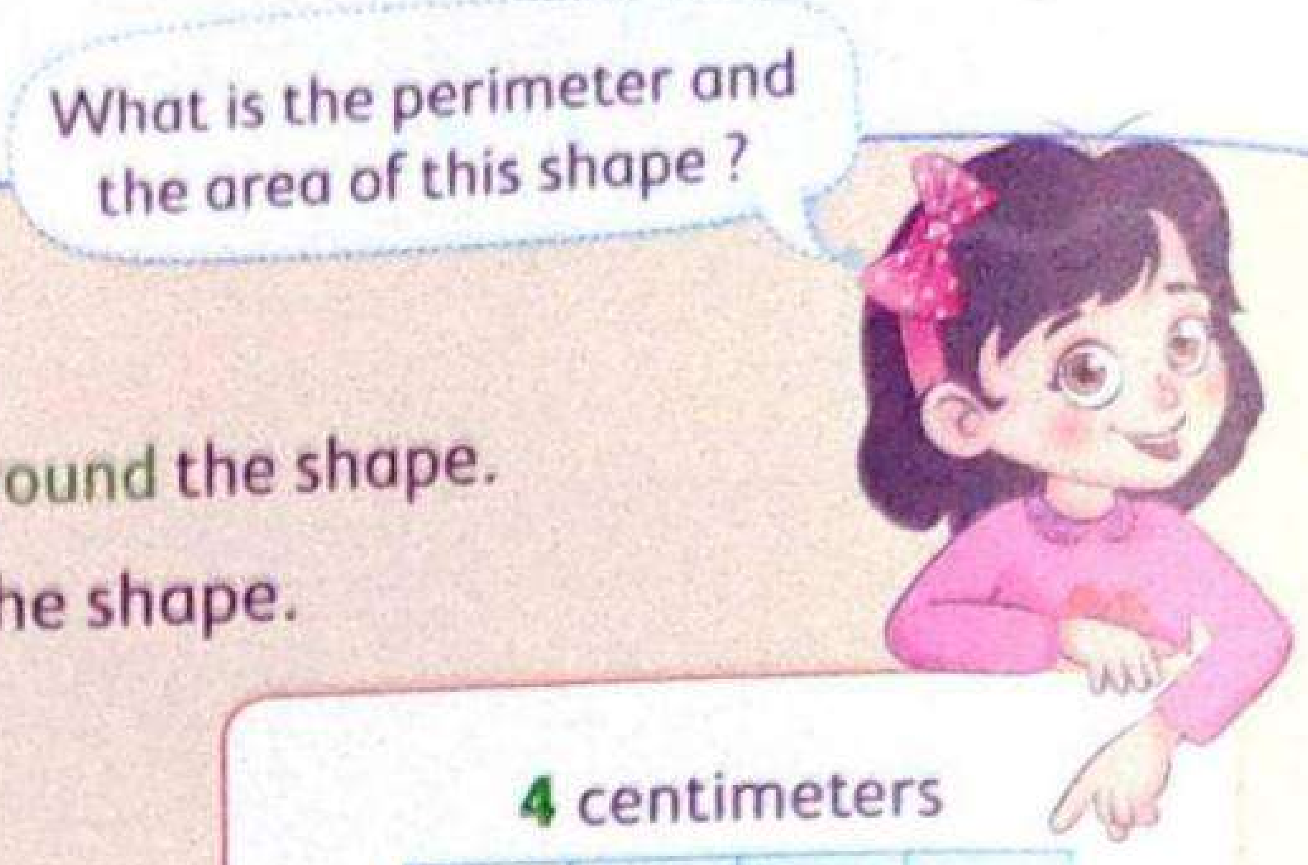


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Lesson 44

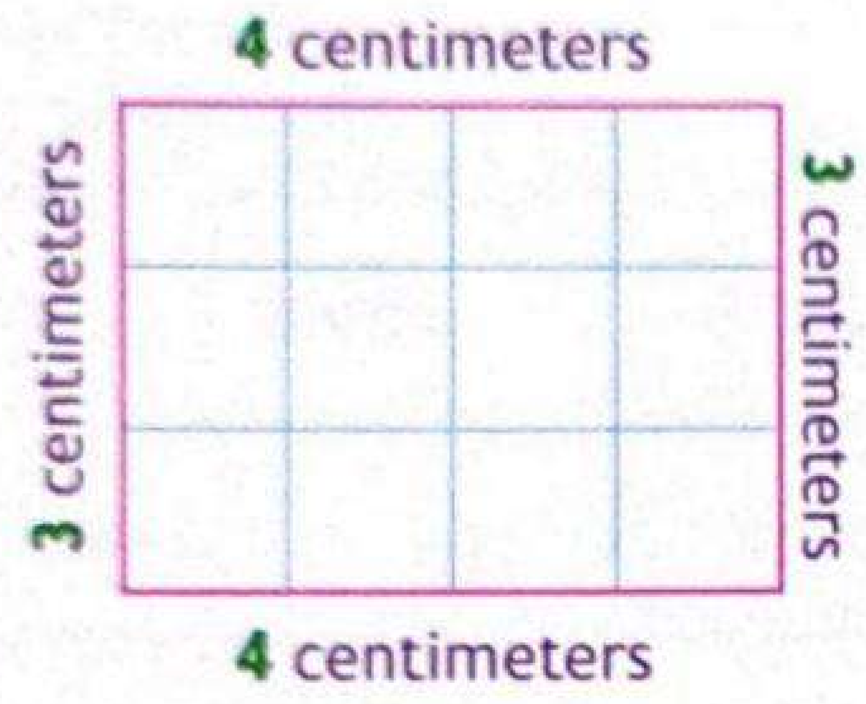
# Perimeter and area

## Learn



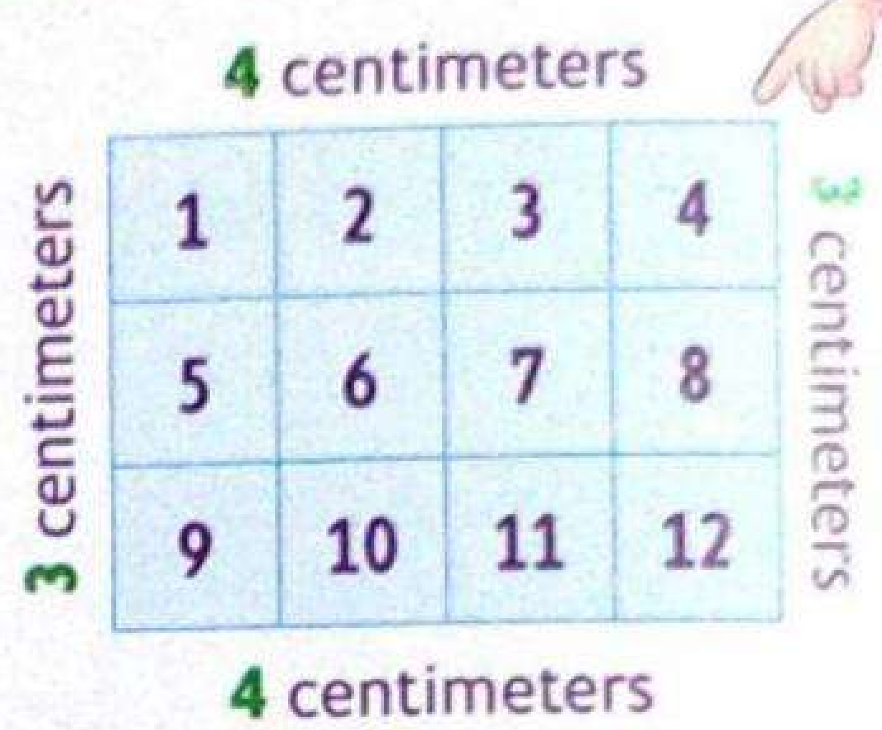

**Remember**

- Perimeter : Measurement of the distance around the shape.
- Area : Measurement of the space inside the shape.




Perimeter = 4 + 3 + 4 + 3

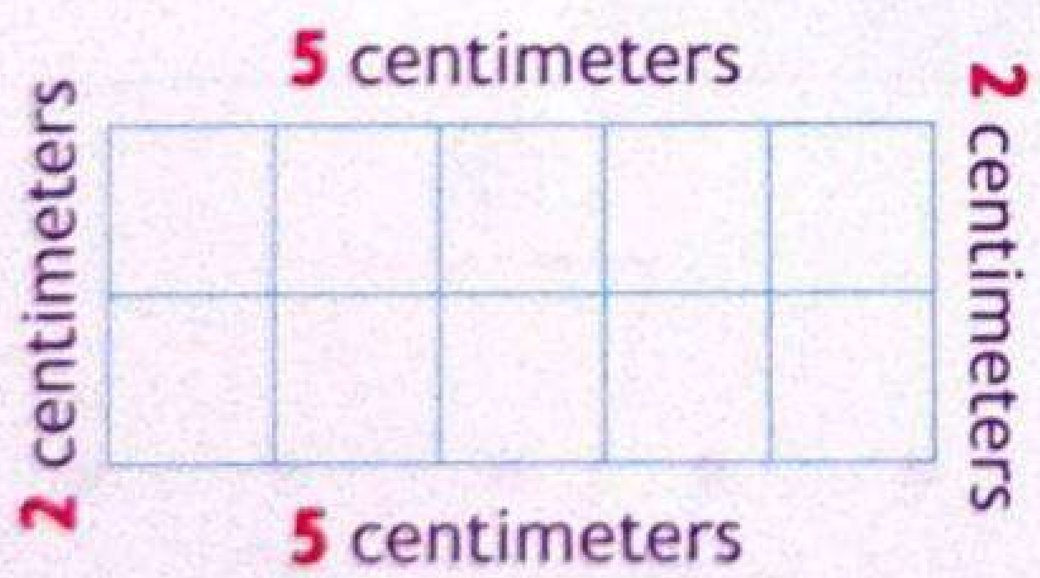
= 14 centimeters.




Area = 12 square centimeters.

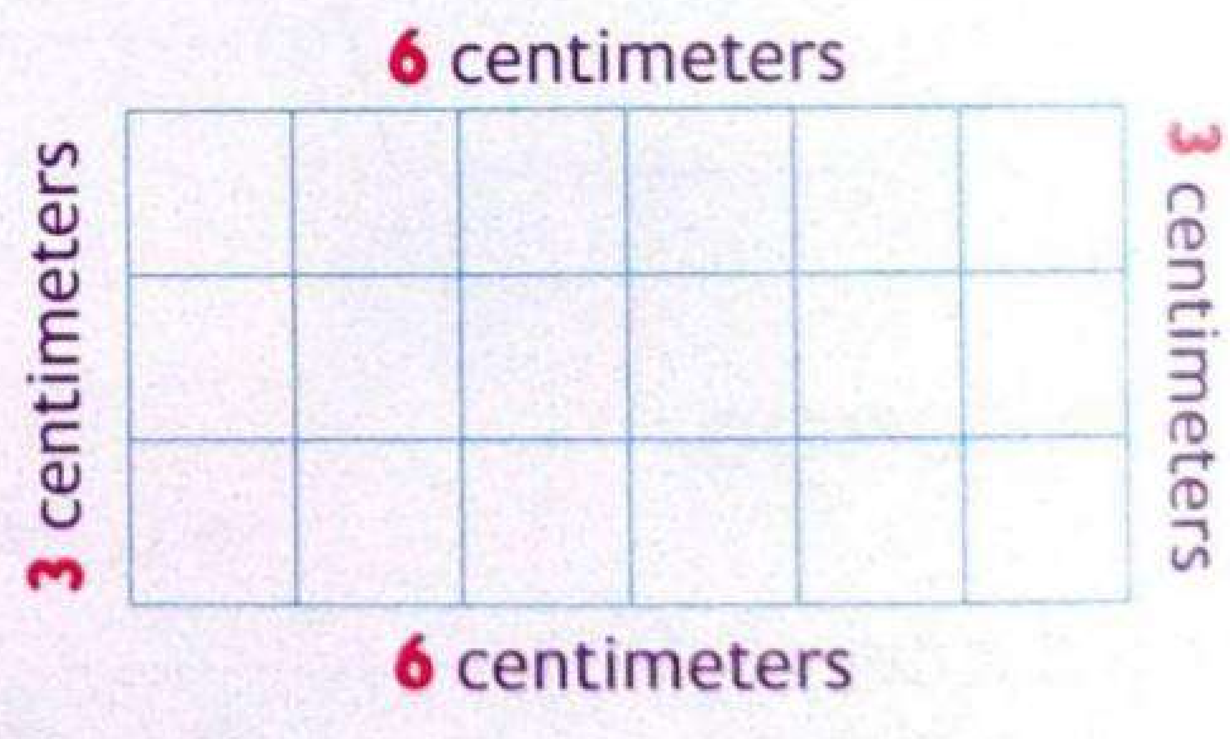
## Check

Find the perimeter and the area of each of the following figures.




- Perimeter = ____ + ____ + ____ + ____ = ____ cm.

Area = ____ square centimeters.




- Perimeter = ____ + ____ + ____ + ____ = ____ cm.

Area = ____ square centimeters.

**Notes for parents**

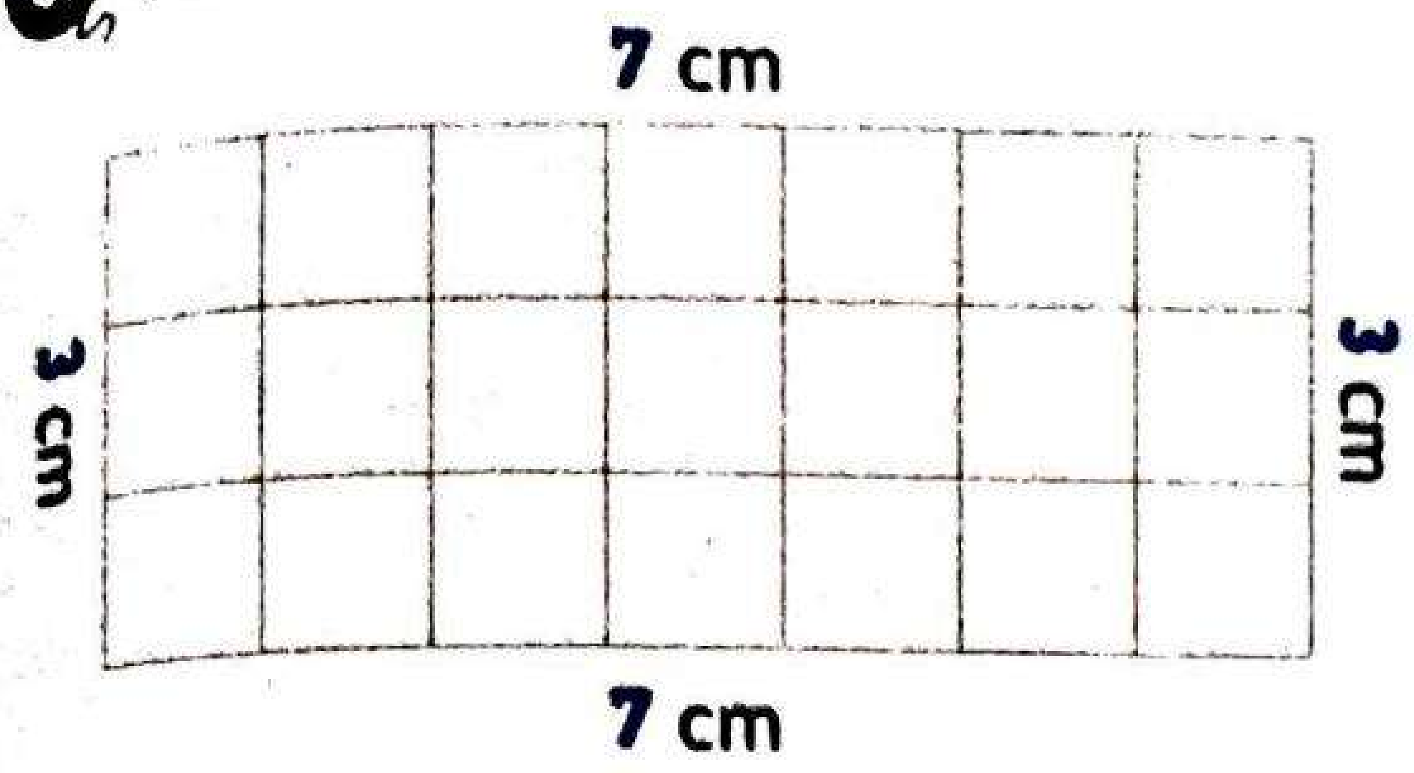
- Let your child color or cross off as he/she counts to avoid counting twice or skipping units.




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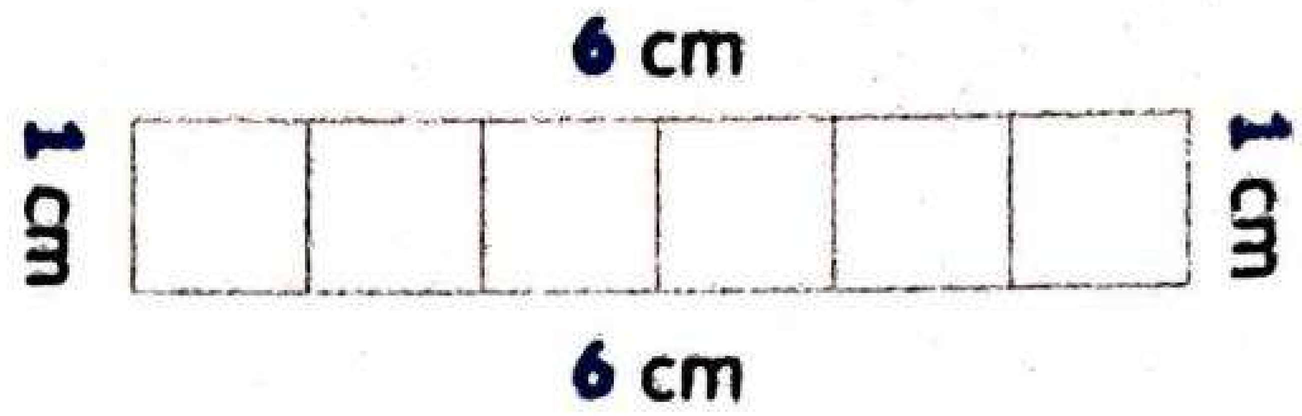
## Practice

1. Find the perimeter and the area of each of the following figures.



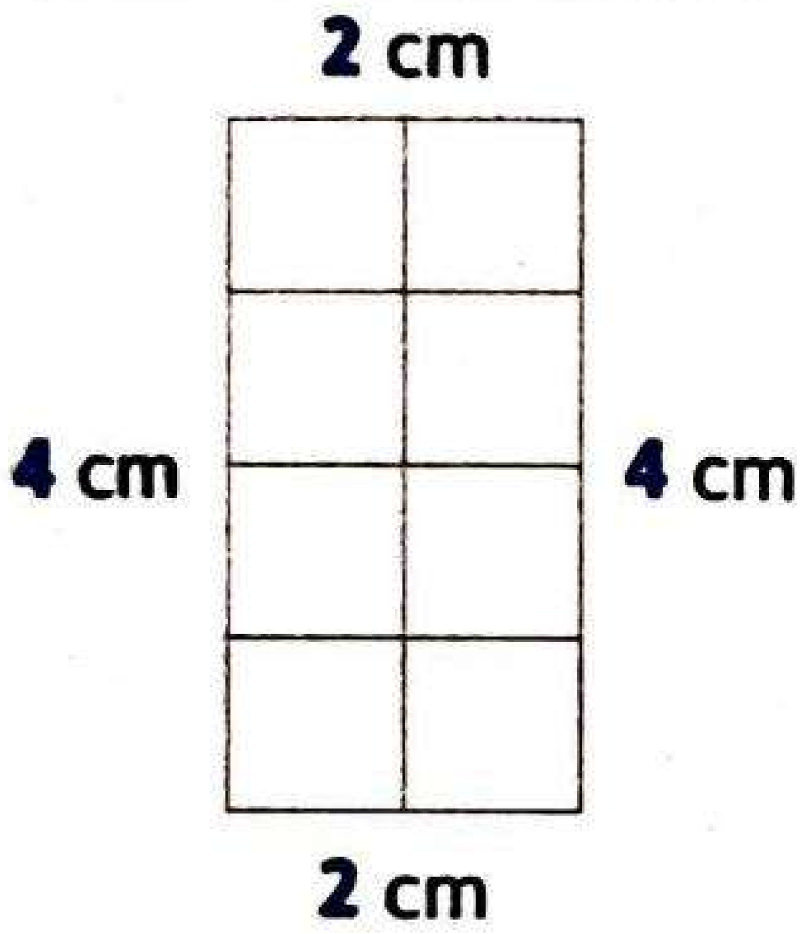

Perimeter = ____ cm

Area = ____ square centimeters



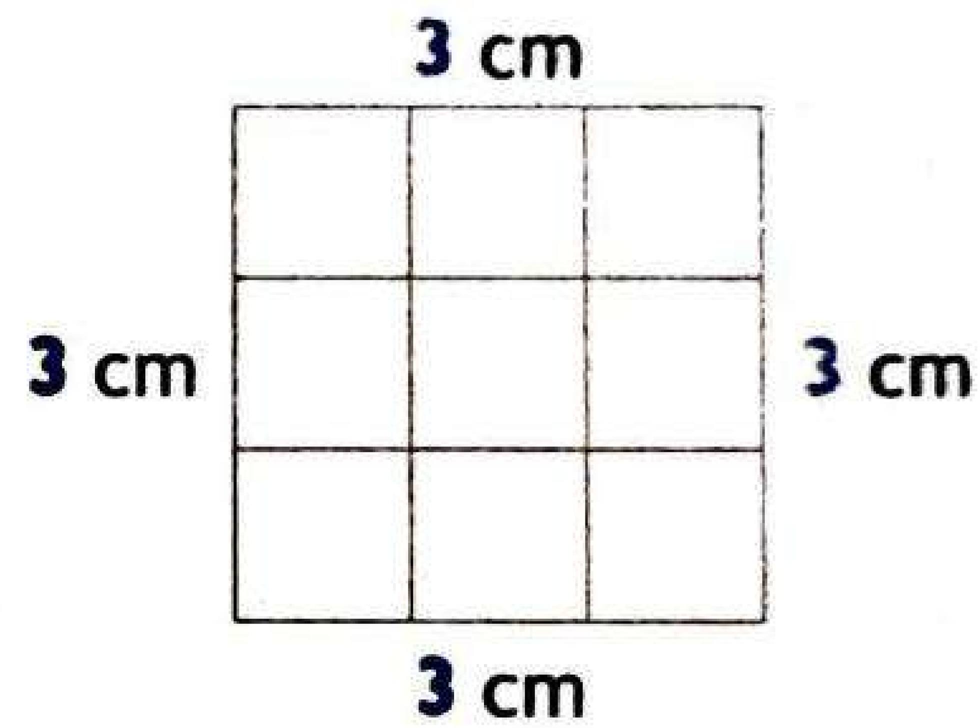

Perimeter = ____ cm

Area = ____ square centimeters




Perimeter = ____ cm

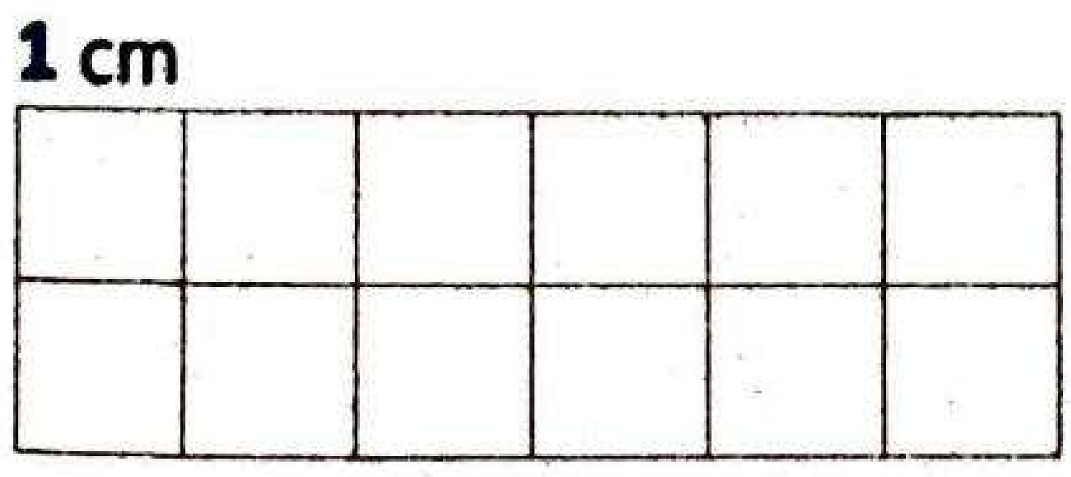
Area = ____ square centimeters




Perimeter = ____ cm

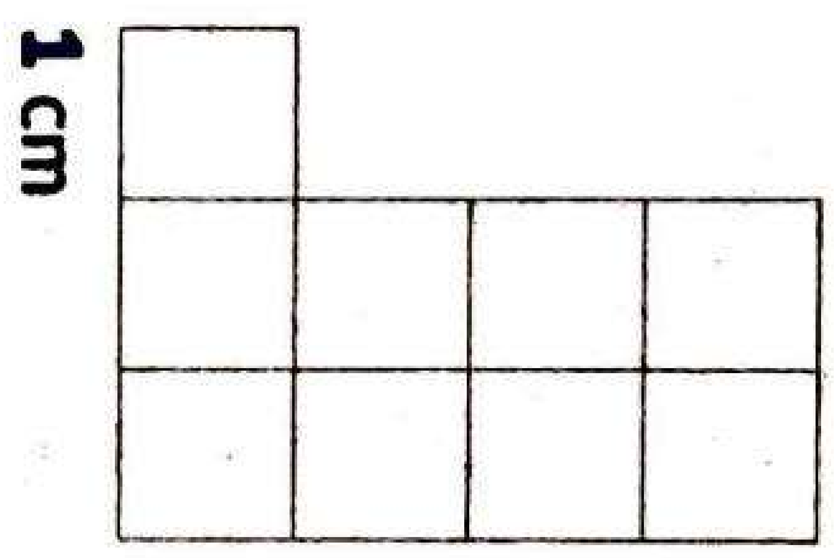
Area = ____ square centimeters

2. Count the length units to measure each side length in each figure. Then calculate its perimeter and its area.




Perimeter = ____ cm

Area = ____ square centimeters




Perimeter = ____ cm

Area = ____ square centimeters

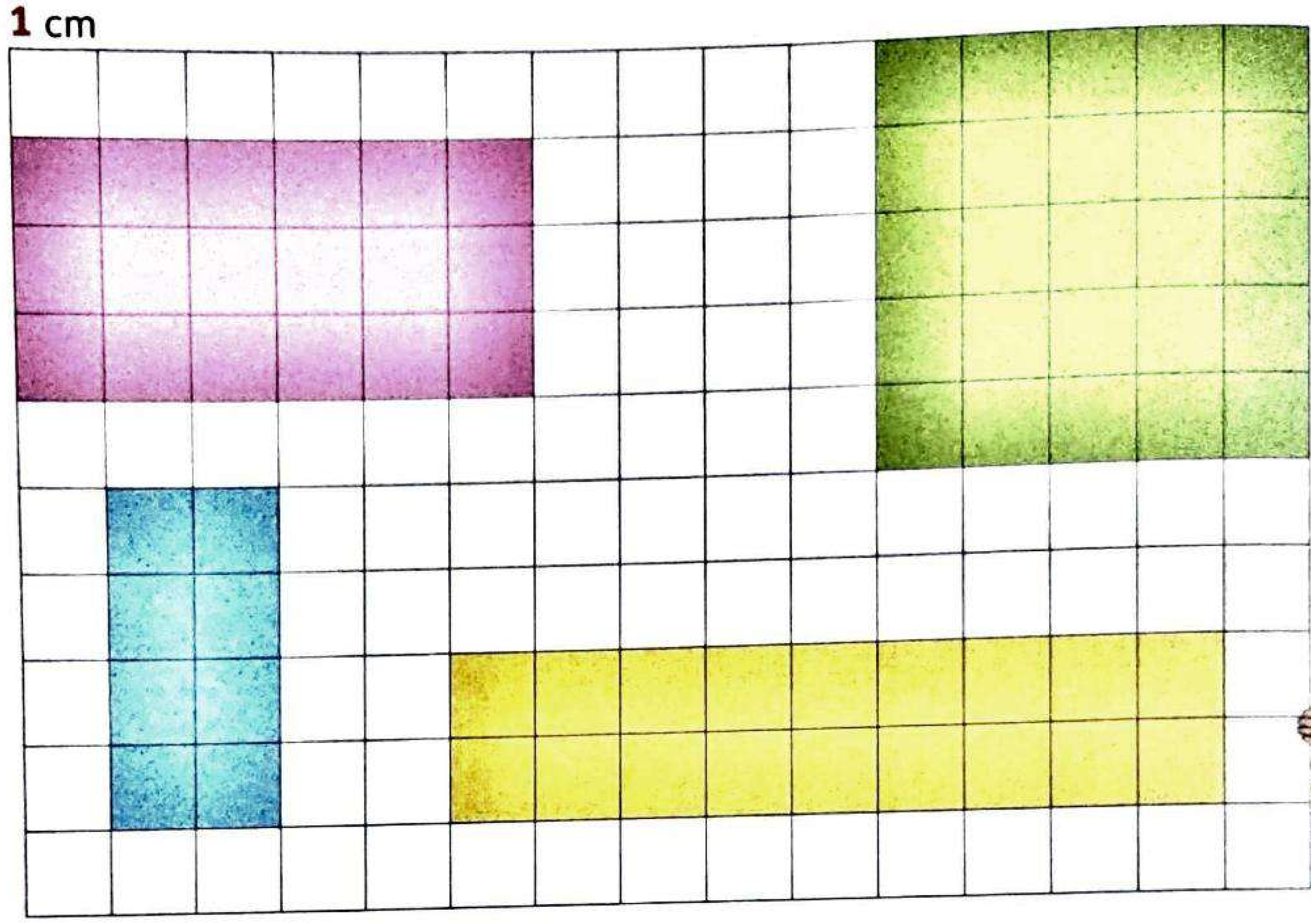
* Ask your child to use a ruler to measure each side length of the figures to calculate the perimeter by adding the side lengths.





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Complete the table. Then answer.






| Region | Perimeter in centimeters | Area in square centimeters |
|---|---|---|
| Red | ........ | ........ |
| Green | ........ | ........ |
| Blue | ........ | ........ |
| Yellow | ........ | ........ |

- **What is the color of the greatest region in area ?** ........
- Arrange the perimeters of regions in an ascending order.

  Order is ........ , ........ , ........ , ........

**Notes for parents**

- Train your child to use different ways to find the perimeters of the above figures.





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## Look at the picture. Then answer.

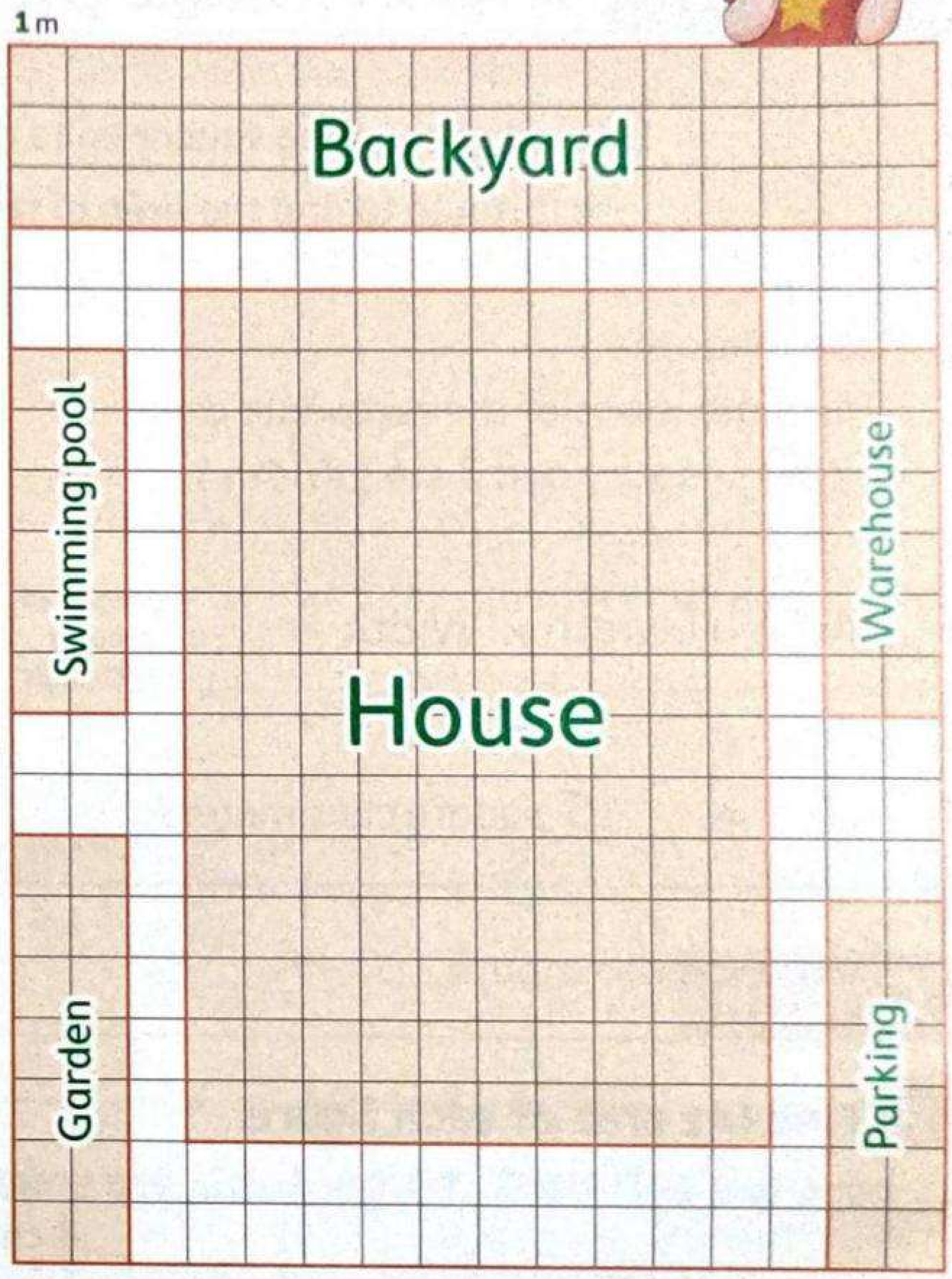
Consider the side length of the small square on the grid is 1 meter.

- What is the area of the backyard ?
  _______ square meters

- What is the perimeter of the house ?
  _______ meters

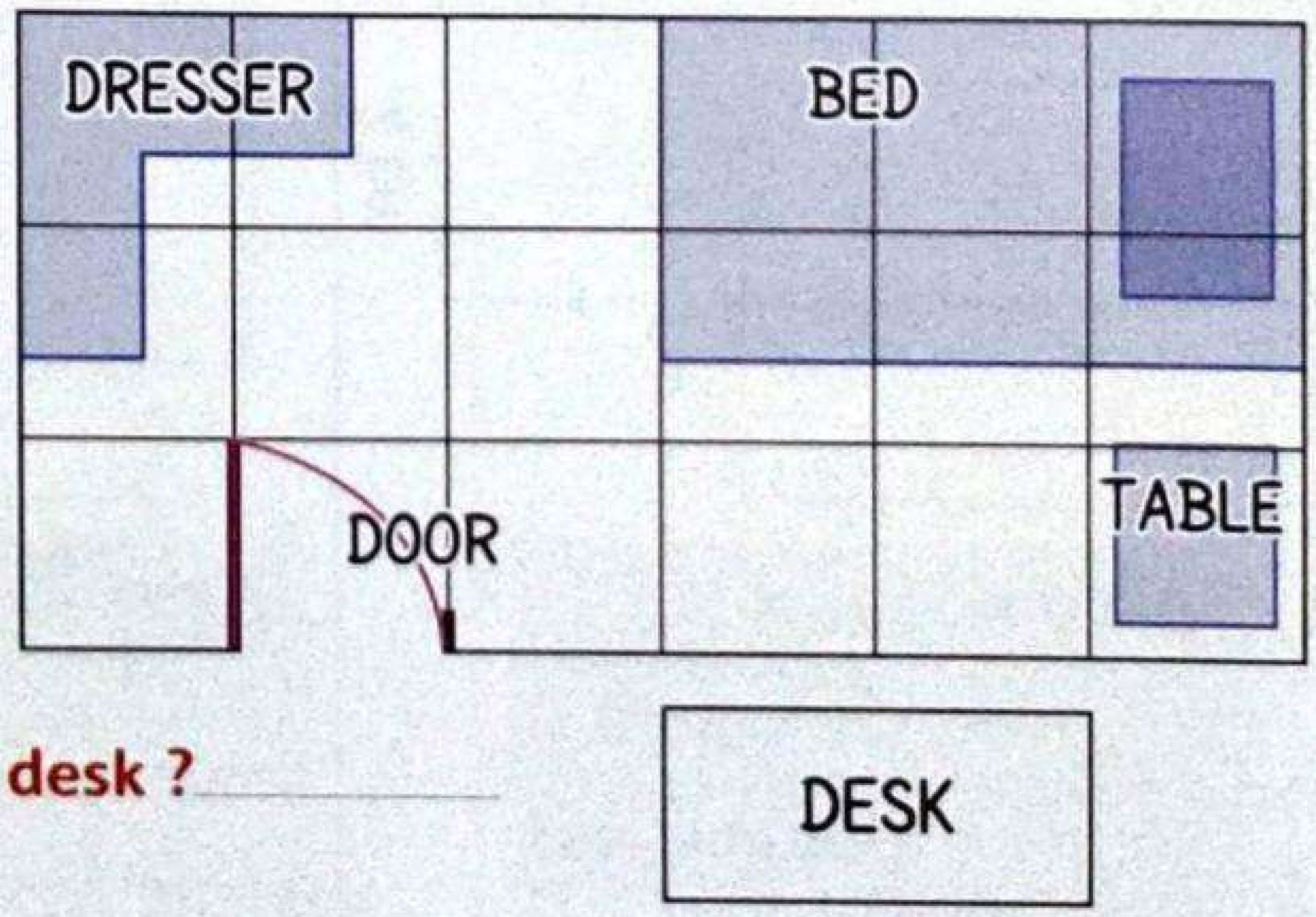
- Are the area of warehouse and the area of garden equal ? Show your work.
  _______________________
  _______________________
  _______________________

- Are the perimeter of parking and the perimeter of swimming pool equal ? Show your work.
  _______________________
  _______________________
  _______________________




## Challenge

- Laila wants to put a new desk in her room. She drew a picture of her room to help figure out where it will fit




**Does Laila have space for her new desk ?** _______
**Color where could she put it.**





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Lessons 45&46

# Finding the area in different strategies

## Learn  Area of rectangle given its dimensions

Instead of counting square units, you can use a formula to find the area of rectangle.



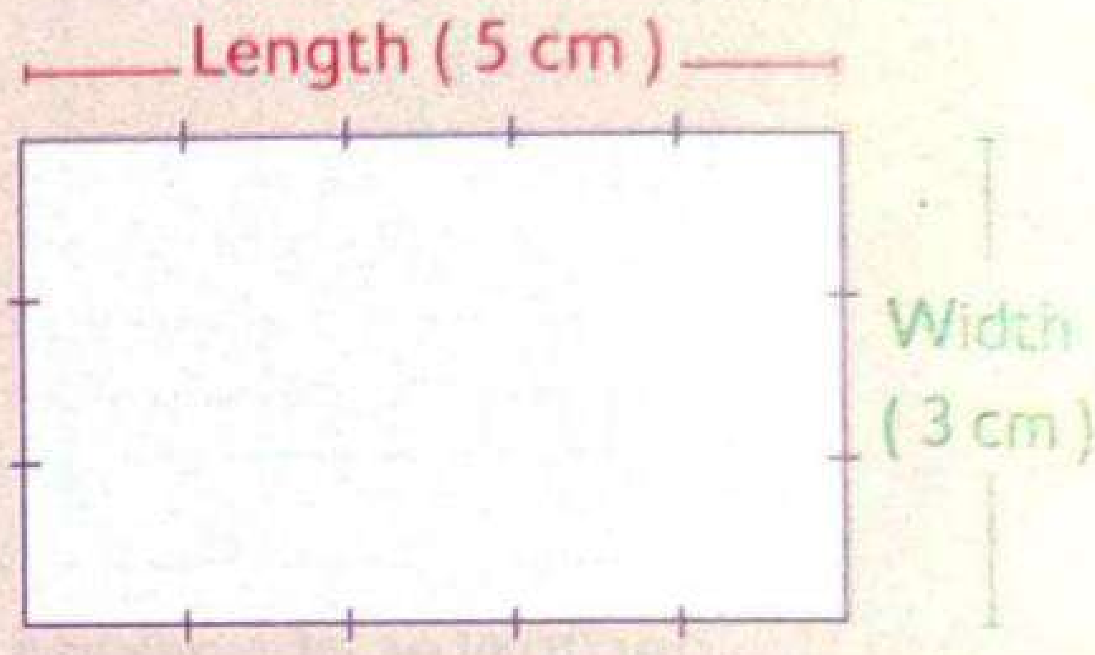
**For example :**

The dimensions of the rectangle are 5 cm ( Length ) and 3 cm ( Width )

Area = Length × Width → Formula of area of a rectangle

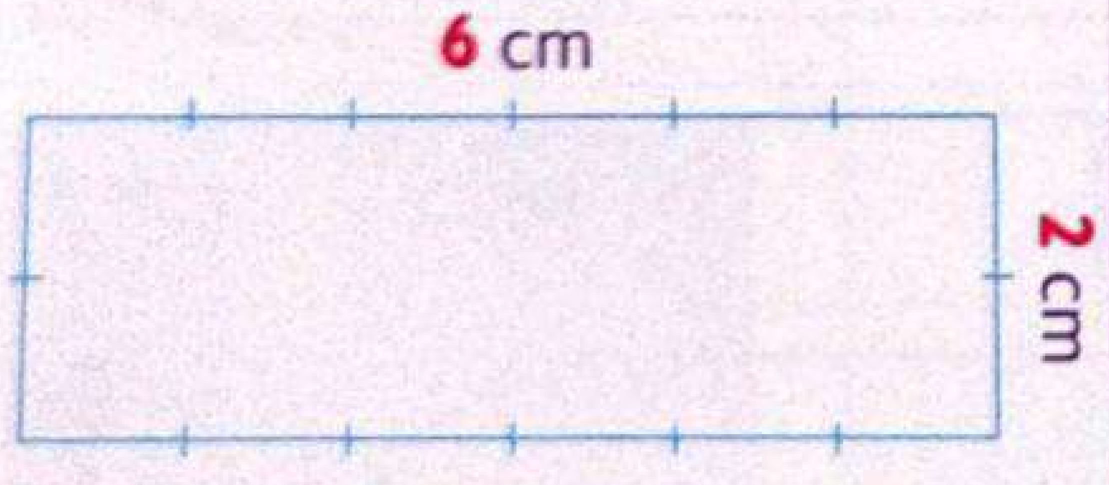
= 5 × 3

= 15 square centimeters



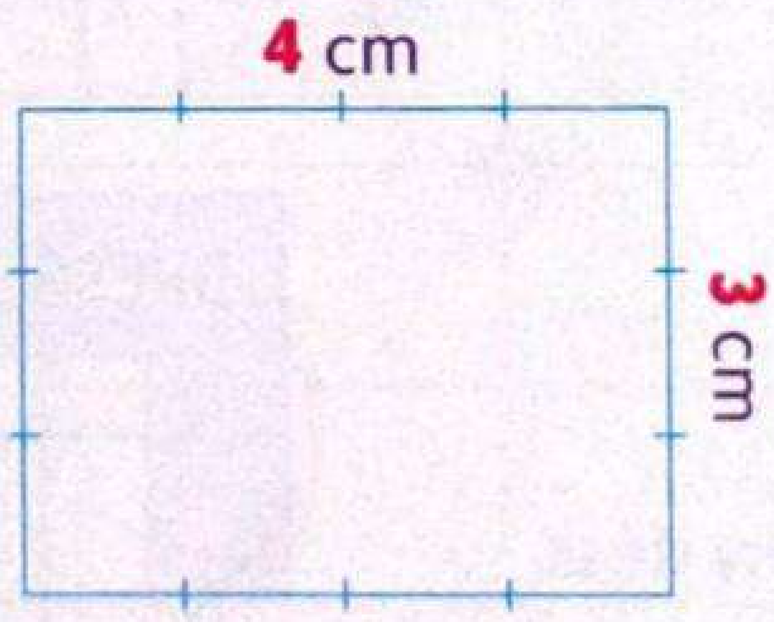

## Check

Find the area of each figure.




Area = ____ × ____

= ____ square centimeters.




Area = ____ × ____

= ____ square centimeters.




Area = ____ × ____

= ____ square centimeters.

**Notes for parents**

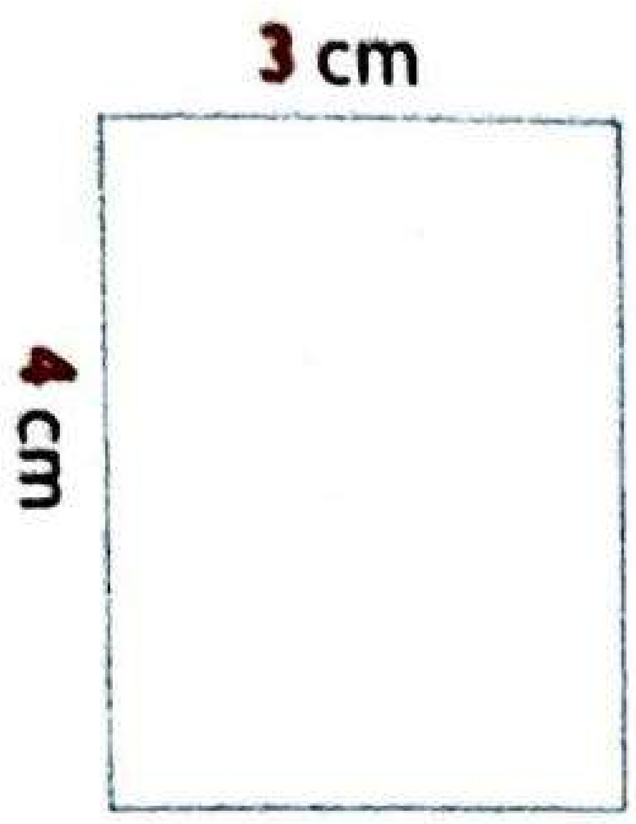
• Help your child to find the area of a rectangle using formula.




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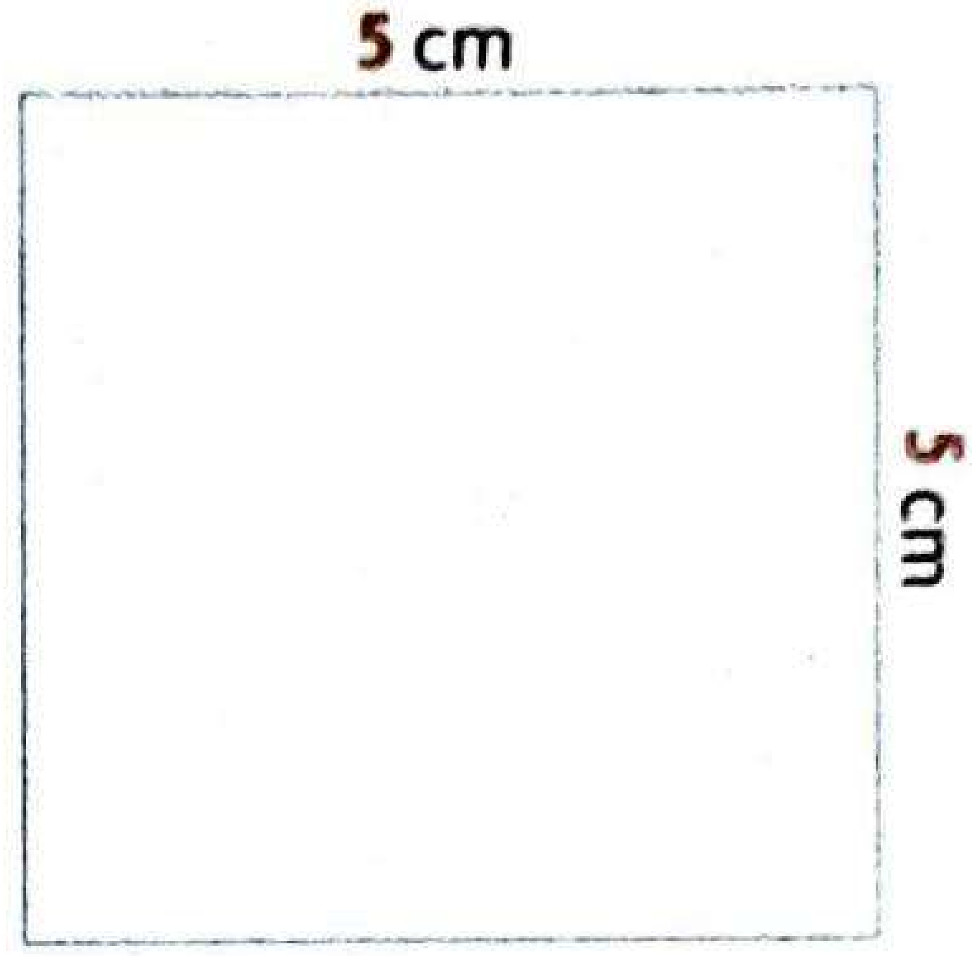
## Practice

1. Find the area of each figure.



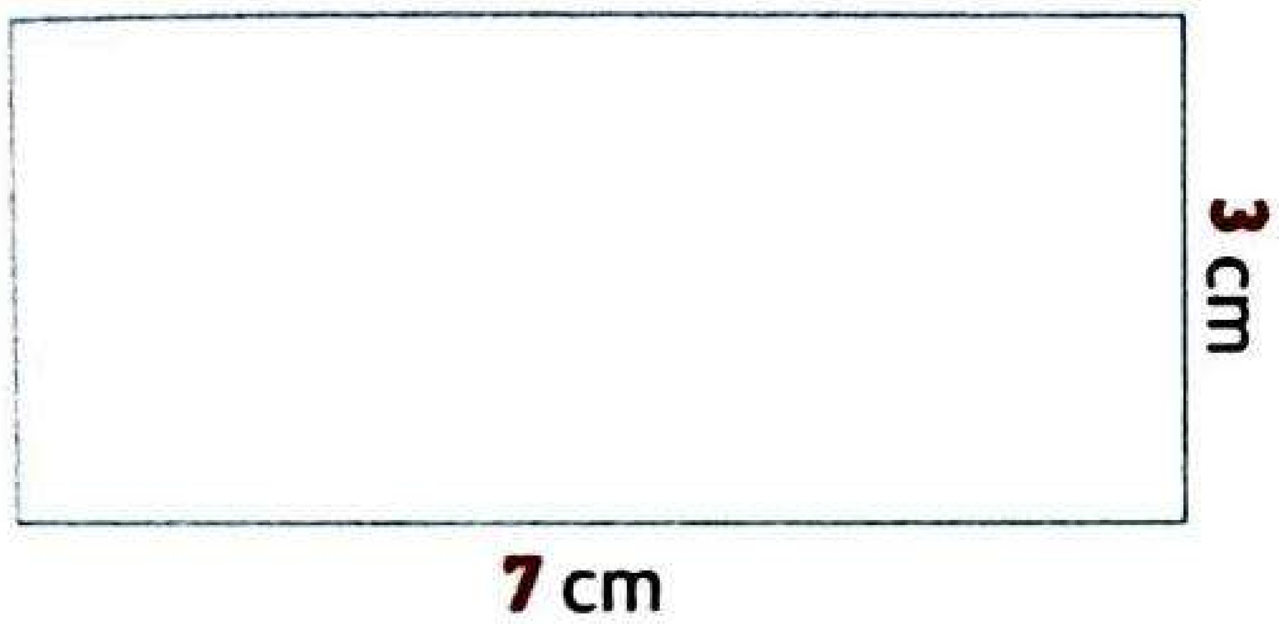

Area = ____ × ____

= ____ square centimeters.




Area = ____ × ____

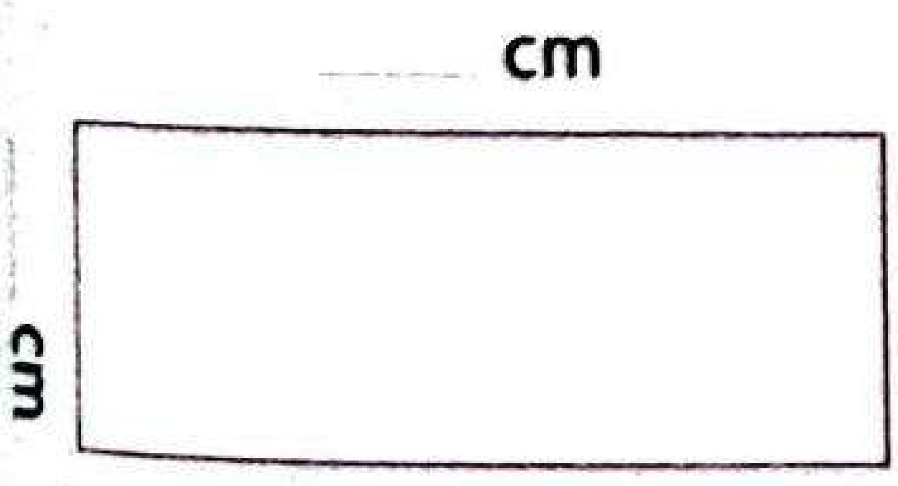
= ____ square centimeters.




Area = ____ × ____

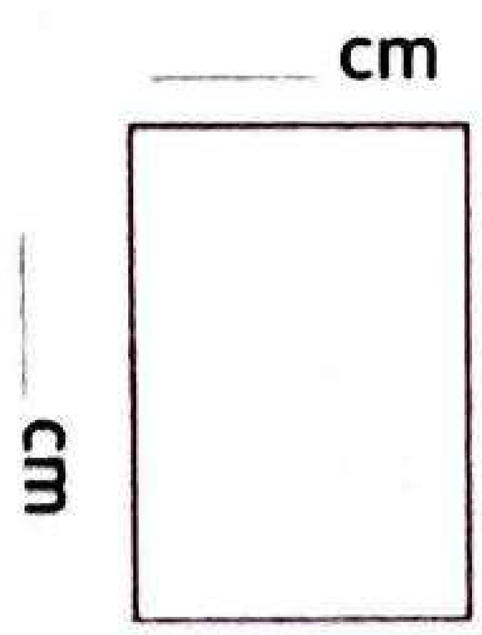
= ____ square centimeters.

2. Use a centimeter ruler to measure the side lengths. Then find the area of each figure.



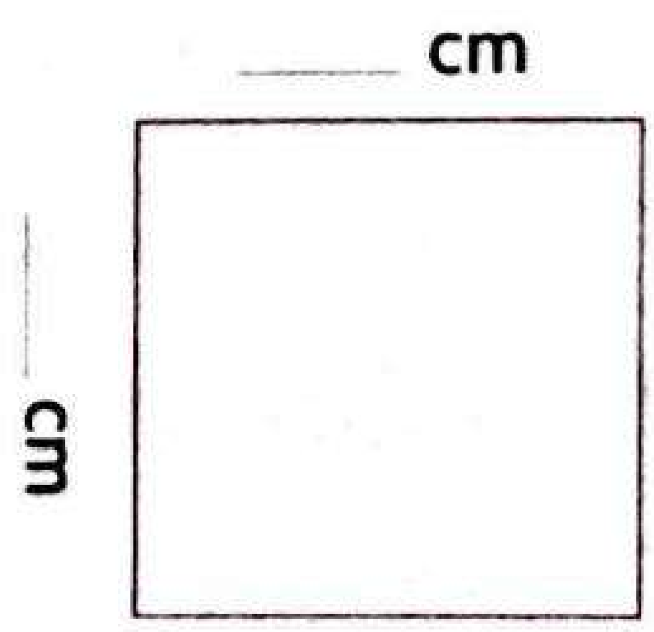

Area = ____ × ____

= ____ square centimeters.




Area = ____ × ____

= ____ square centimeters.




Area = ____ × ____

= ____ square centimeters.

• Help your child to use his/her ruler to find the area of his/her math book.





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Find the area of each figure. Then color the figure with the greatest area in red.

____ cm

____ cm

Area = ____ × ____

= ____ square centimeters.

____ cm

____ cm

Area = ____ × ____

= ____ square centimeters.

____ cm

____ cm

Area = ____ × ____

= ____ square centimeters.

____ cm

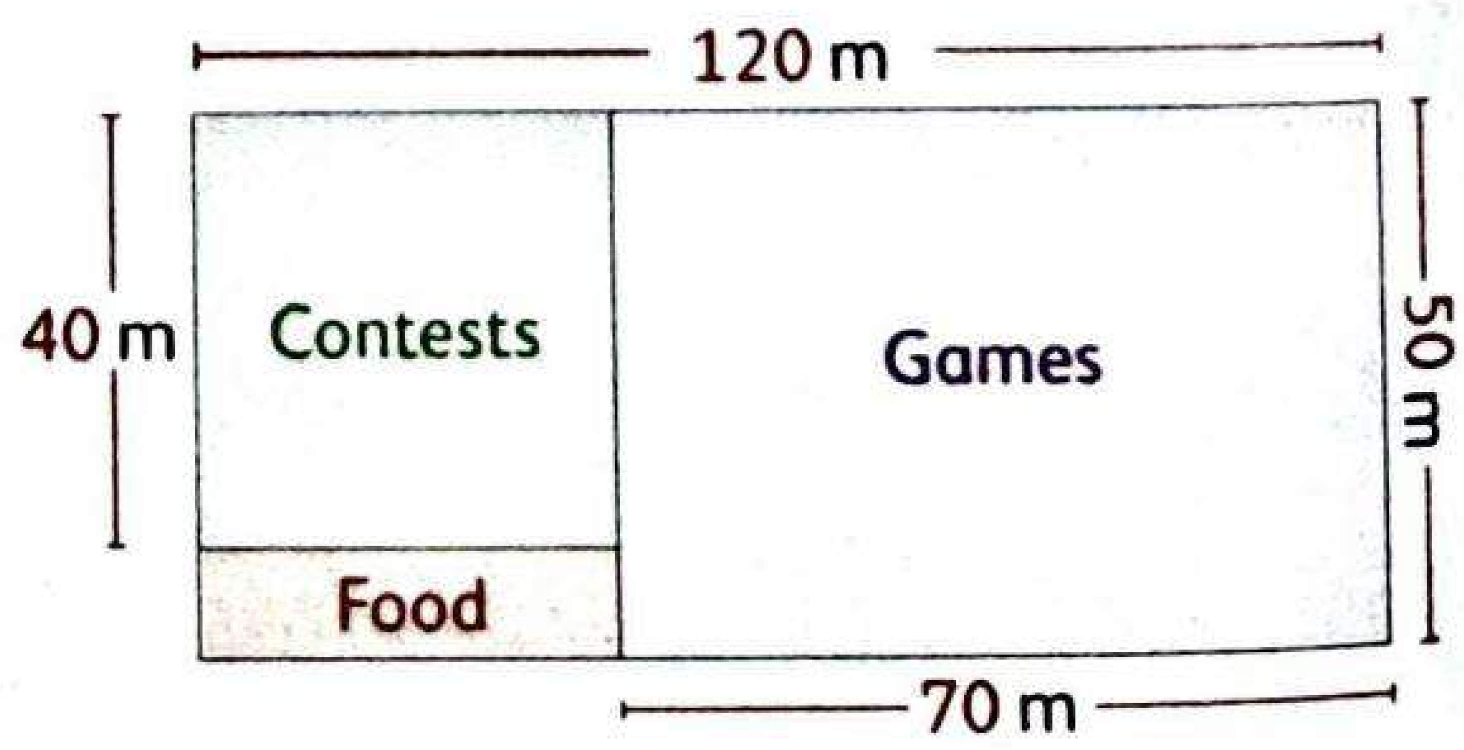
____ cm

Area = ____ × ____

= ____ square centimeters.

## Challenge

- The opposite figure shows how a school field was sectioned off for the end-of-year picnic. What is the area of food section in square meters ?




**Notes for parents**

- Help your child to find the area of his/her home.





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Find the space areas in the parking. Then write the name of each main transport below its suitable space.

- **Car** $> 18$ square meters.



- **Motorcycle** $< 8$ square meters.



- **Lorry** $< 30$ square meters.
  **but** $> 26$ square meters.



- **Bus** $> 20$ square meters.




**Parking**

8 m × 3 m

Area = ____________

Name : ____________

5 m × 4 m

Area = ____________

Name : ____________

4 m × 2 m

Area = ____________

Name : ____________

7 m × 4 m

Area = ____________

Name : ____________

• Help your child to determine the suitable space for each main transport.





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## Learn — Calculating the area using different strategies

- Ahmed wants to put artificial grass in his garden.
  The garden is a rectangle
  5 meters long and 3 meters wide.
  **How many square meters of artificial grass does Ahmed need ?**



- To find how many square meters of artificial grass, find area of the floor.
- There are different strategies to find the area of the rectangle.

### Strategy 1

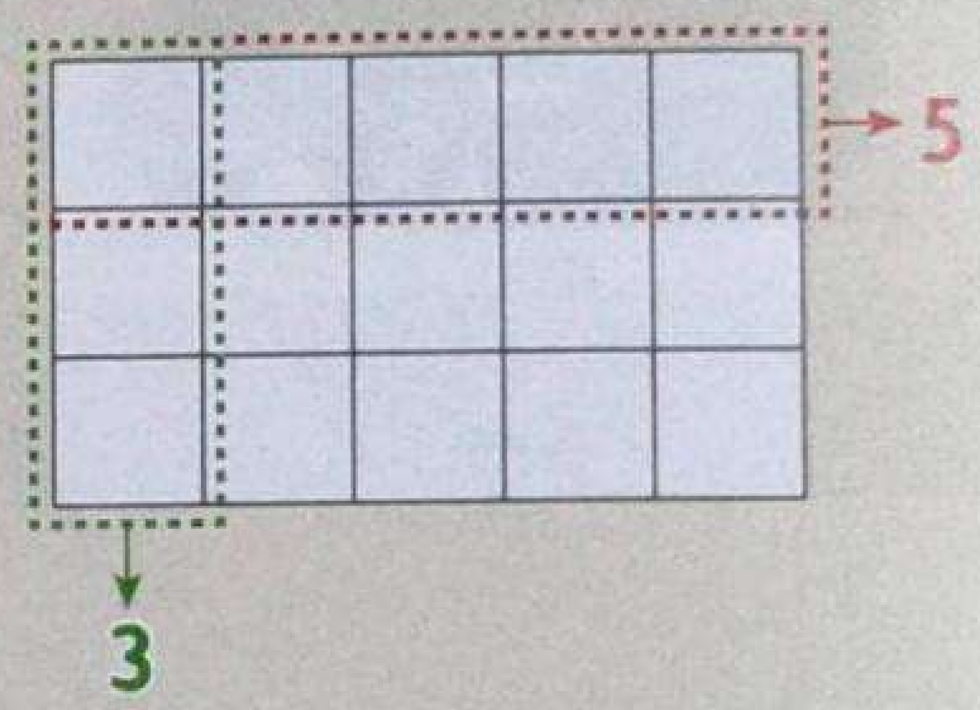
5 columns, 3 rows

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |

Count all of the squares in the array.

Area = 15 square meters

### Strategy 2

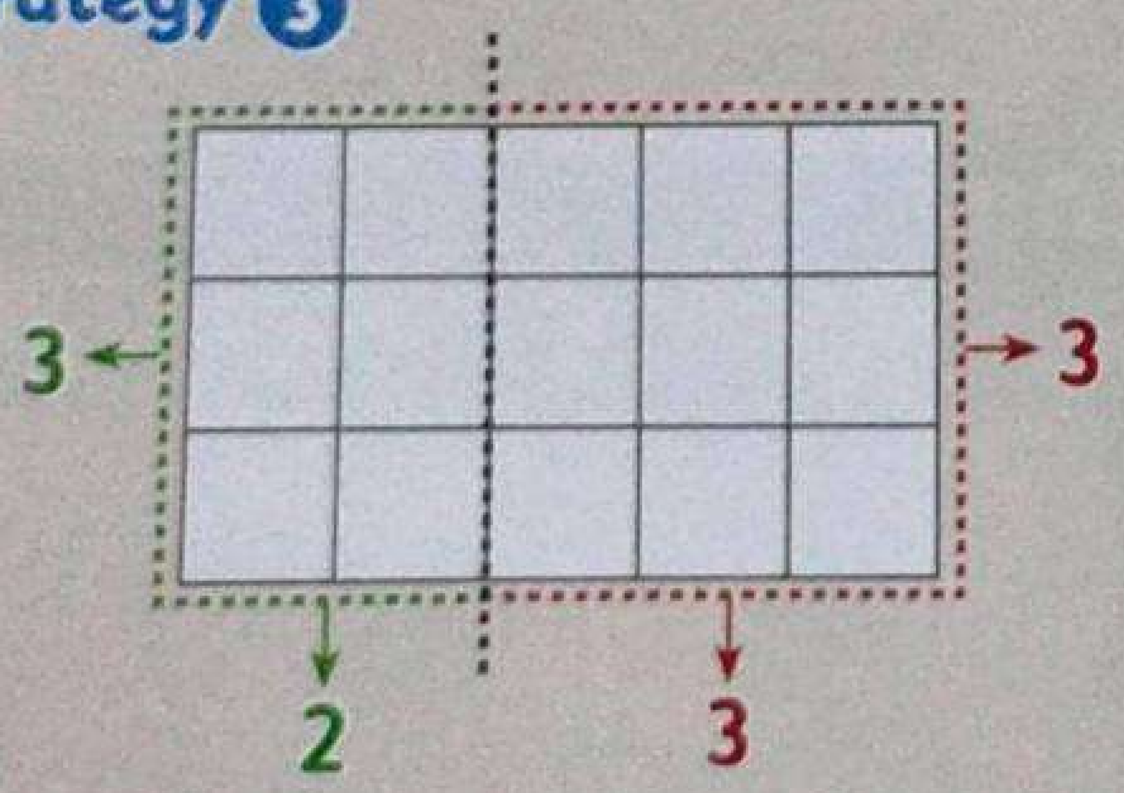



Add

5 + 5 + 5 = 15 or 3 + 3 + 3 + 3 + 3 = 15

Area = 15 square meters

### Strategy 3

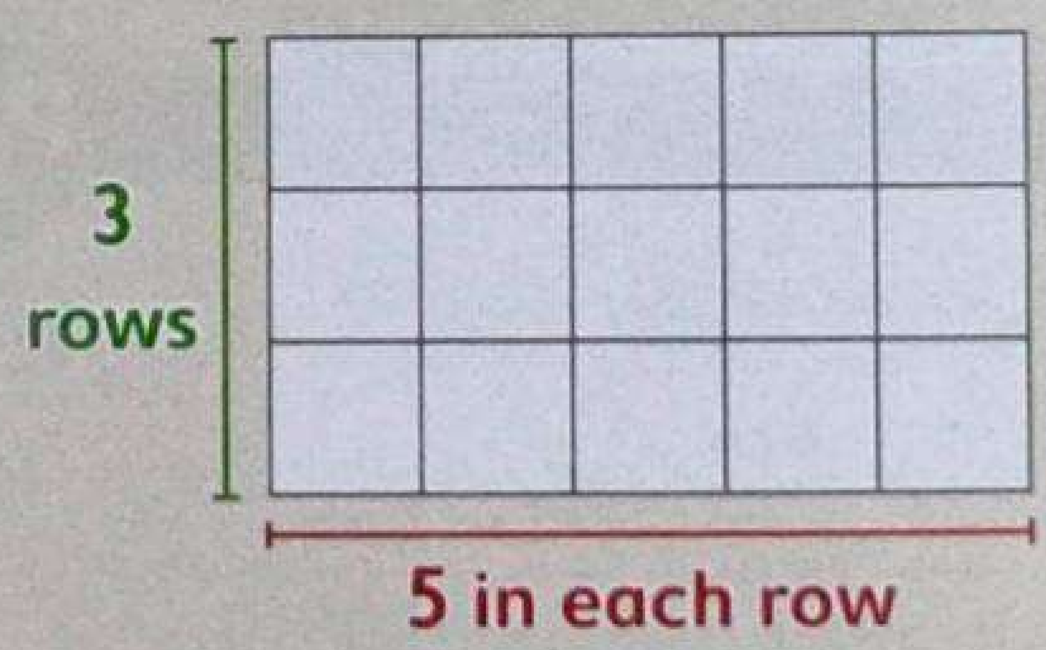



Split the array into two smaller arrays.
Solve both and add the sums.

Area = 3 x 5 = (3 x 2)+ (3 x 3)

= 6 + 9 = 15 square meters

### Strategy 4




Multiply units "Formula of area of a rectangle".

Area = 3 x 5 = 15 square meters

**Notes for parents**

- Help your child to find the area of his/her room.




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## Practice

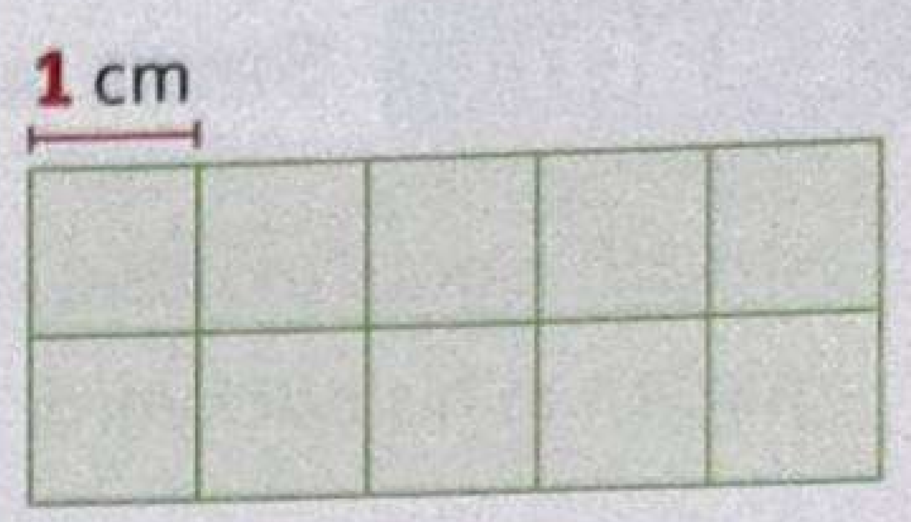
Find the area of each figure in two ways.

**Way 1**

Area = ______ square centimeters.

**Way 2**

Area = ______ square centimeters.

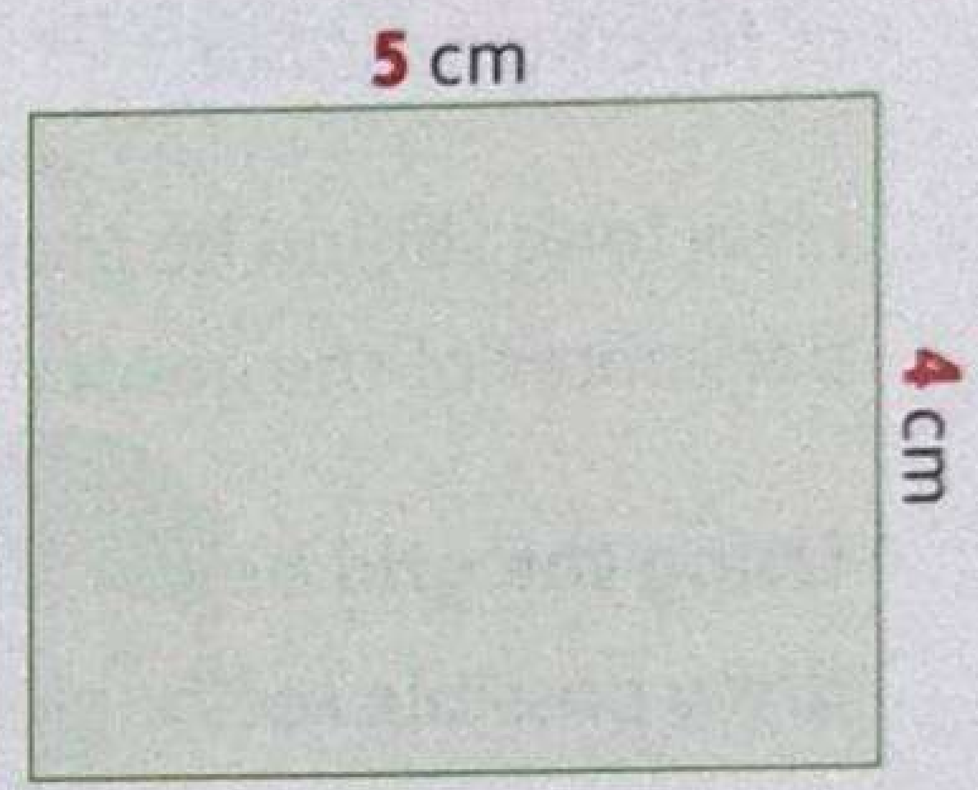



**Way 1**

Area = ______ square centimeters.

**Way 2**

Area = ______ square centimeters.

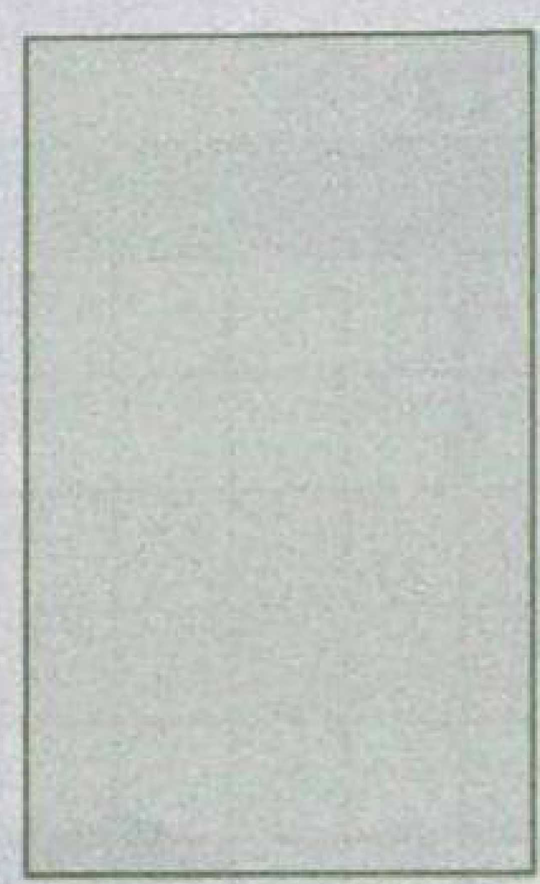


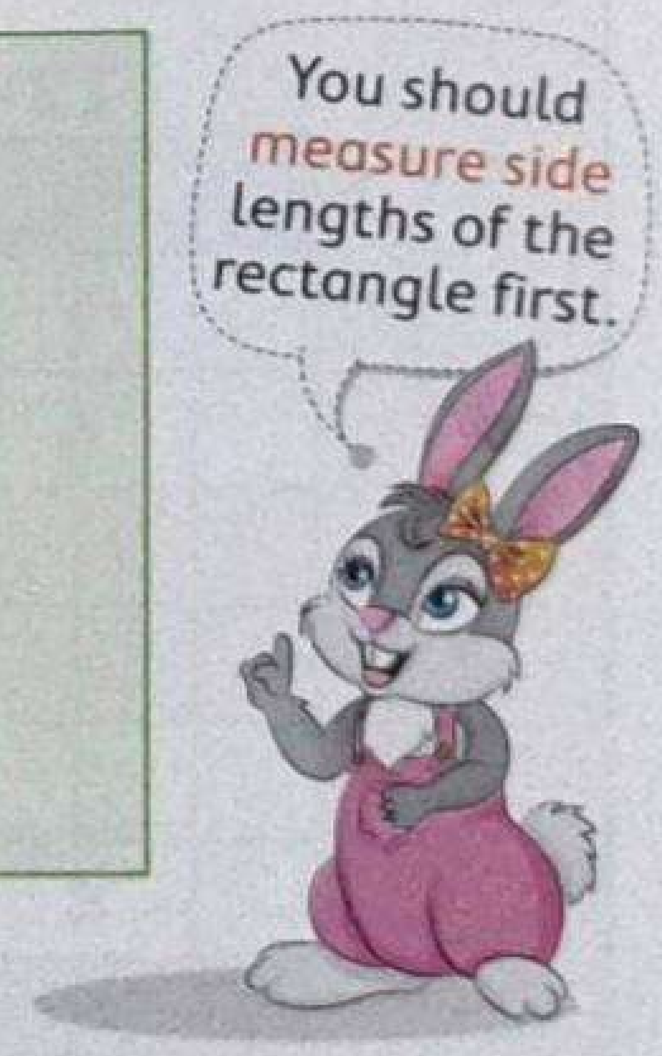

**Way 1**

Area = ______ square centimeters.

**Way 2**

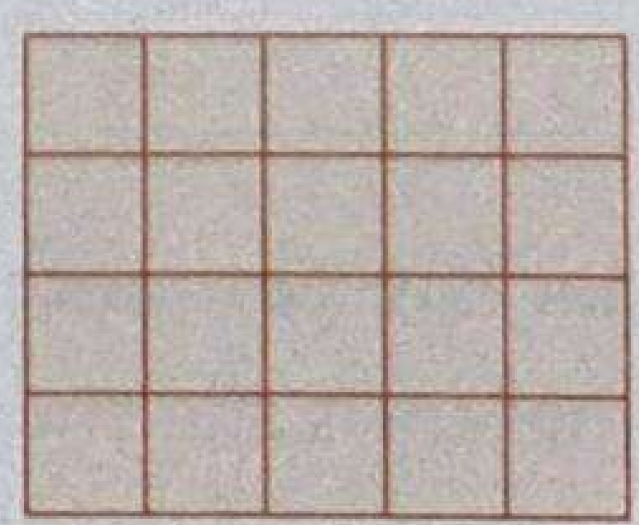
Area = ______ square centimeters.






## Challenge

- Divide the square units of the grid into rectangles to represent each of the following areas
  - Area 1 = 4 square units.
  - Area 2 = 6 square units.
  - Area 3 = 10 square units.



• Help your child to find the area of the rectangle in two ways.

Place a smiley face





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Lessons **47 & 48**

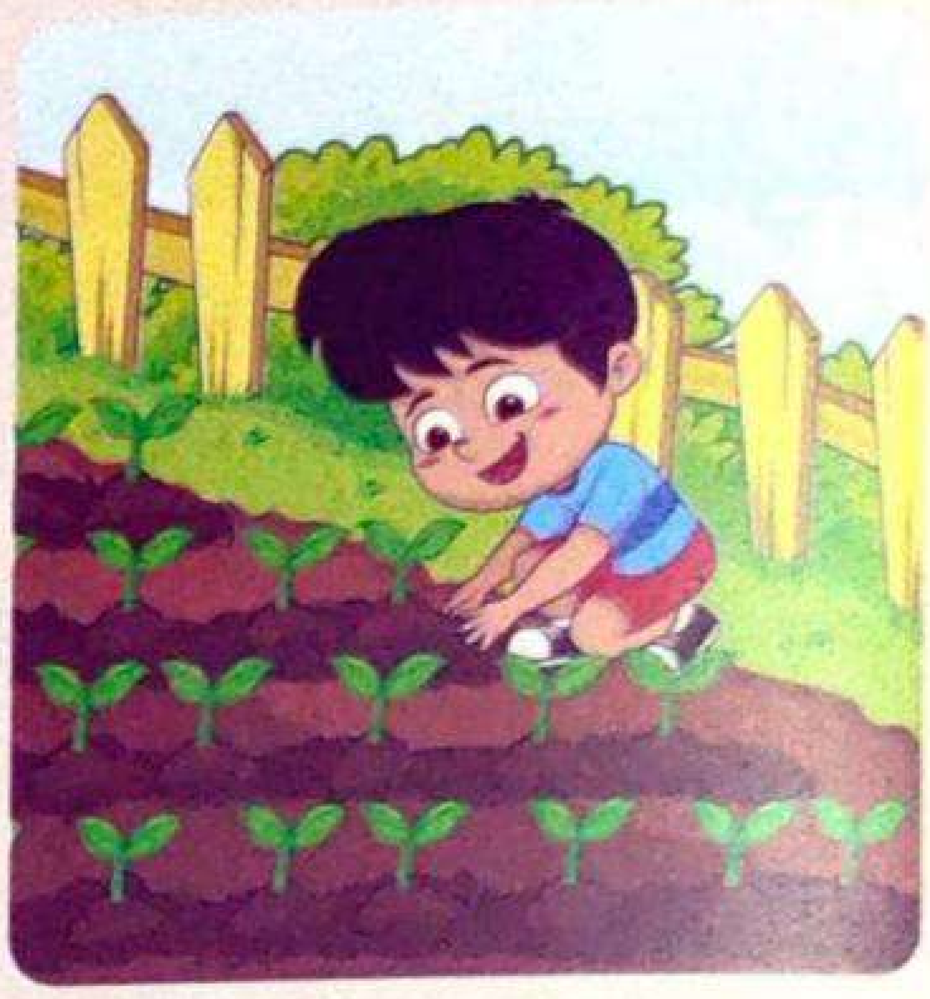
# Relate perimeter and area

## Learn — Same area, different perimeter

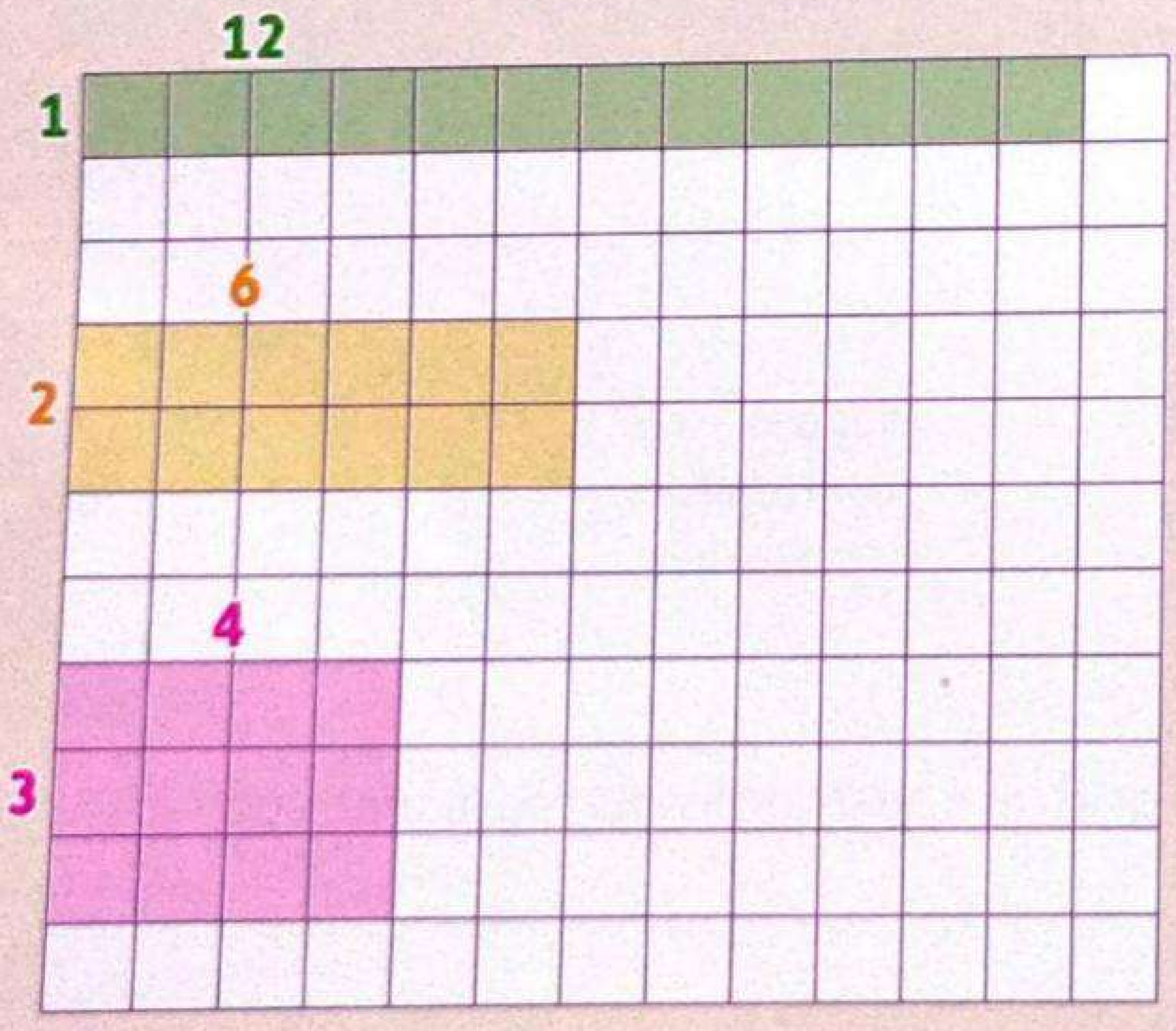
- Amgad wants to plant a rectangular flower garden in his backyard.

  The area of the garden has to be **12** square meters, and he wants to use the least amount of fencing possible.

  How long should he make each side so that the perimeter of the garden is as small as possible ?



- **Using the grid below** (consider each square side on the grid = **1** meter), draw possible rectangles that have an area of **12** square units, then find the perimeter of each rectangle.




Perimeter = 1 + 12 + 1 + 12
= 26 length units

Perimeter = 2 + 6 + 2 + 6
= 16 length units

Perimeter = 3 + 4 + 3 + 4
= 14 length units

- **Order the perimeters :** 26 > 16 > 14

  14 meters is the smallest perimeter.

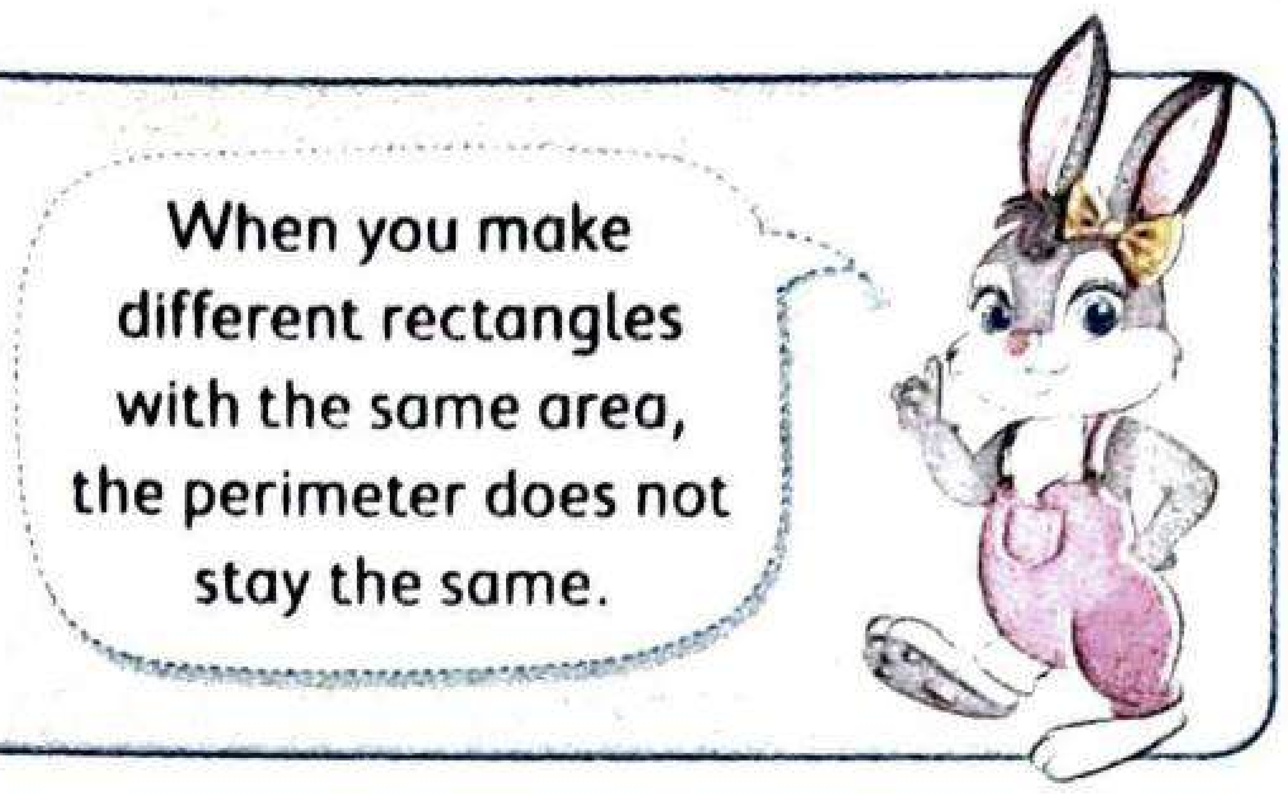
**Notes for parents**

- Train your child to calculate the perimeters of the figures above.



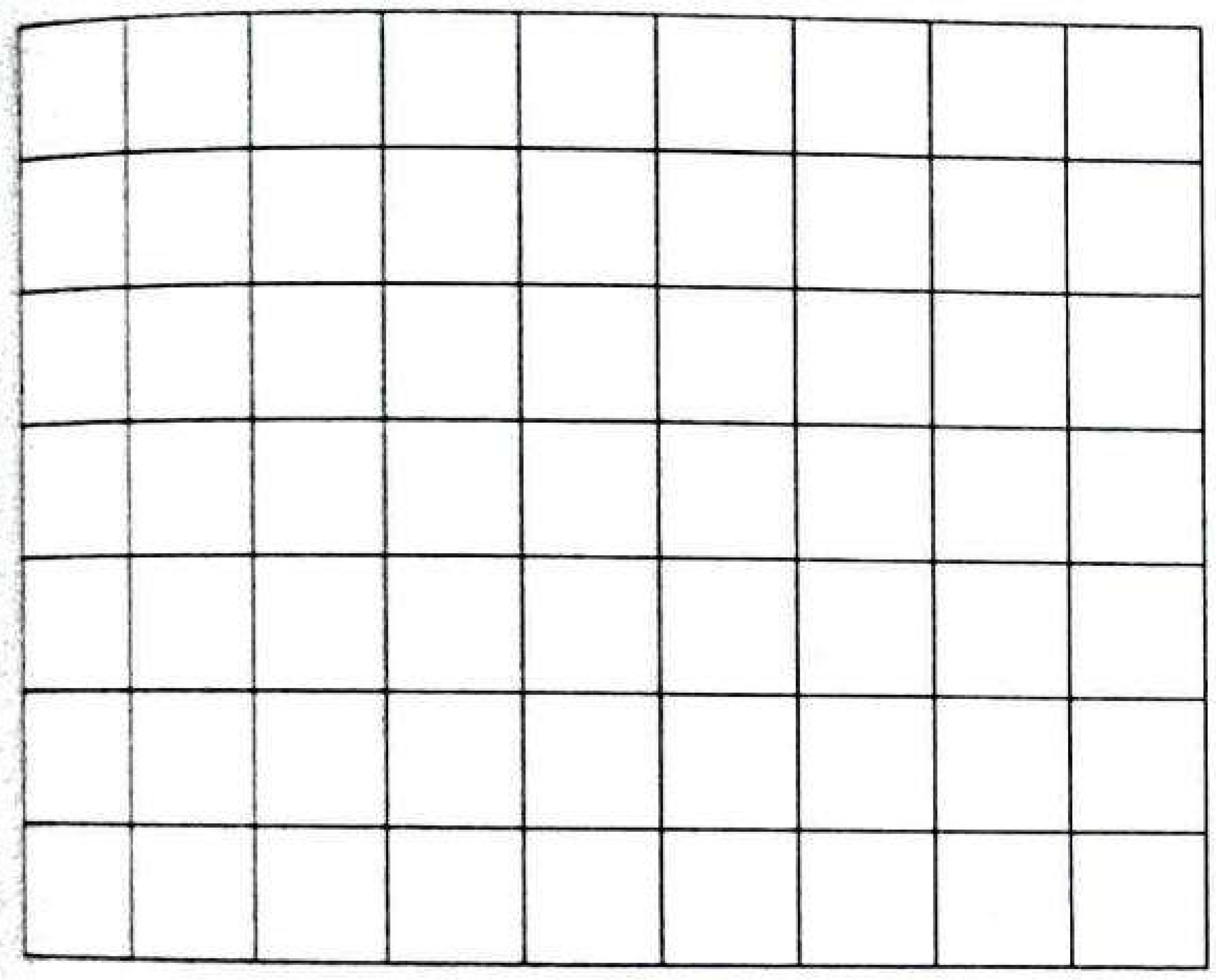

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- **So,** to have a garden with the smallest perimeter possible Amgad should make a rectangle with sides 3 m, 4 m long.



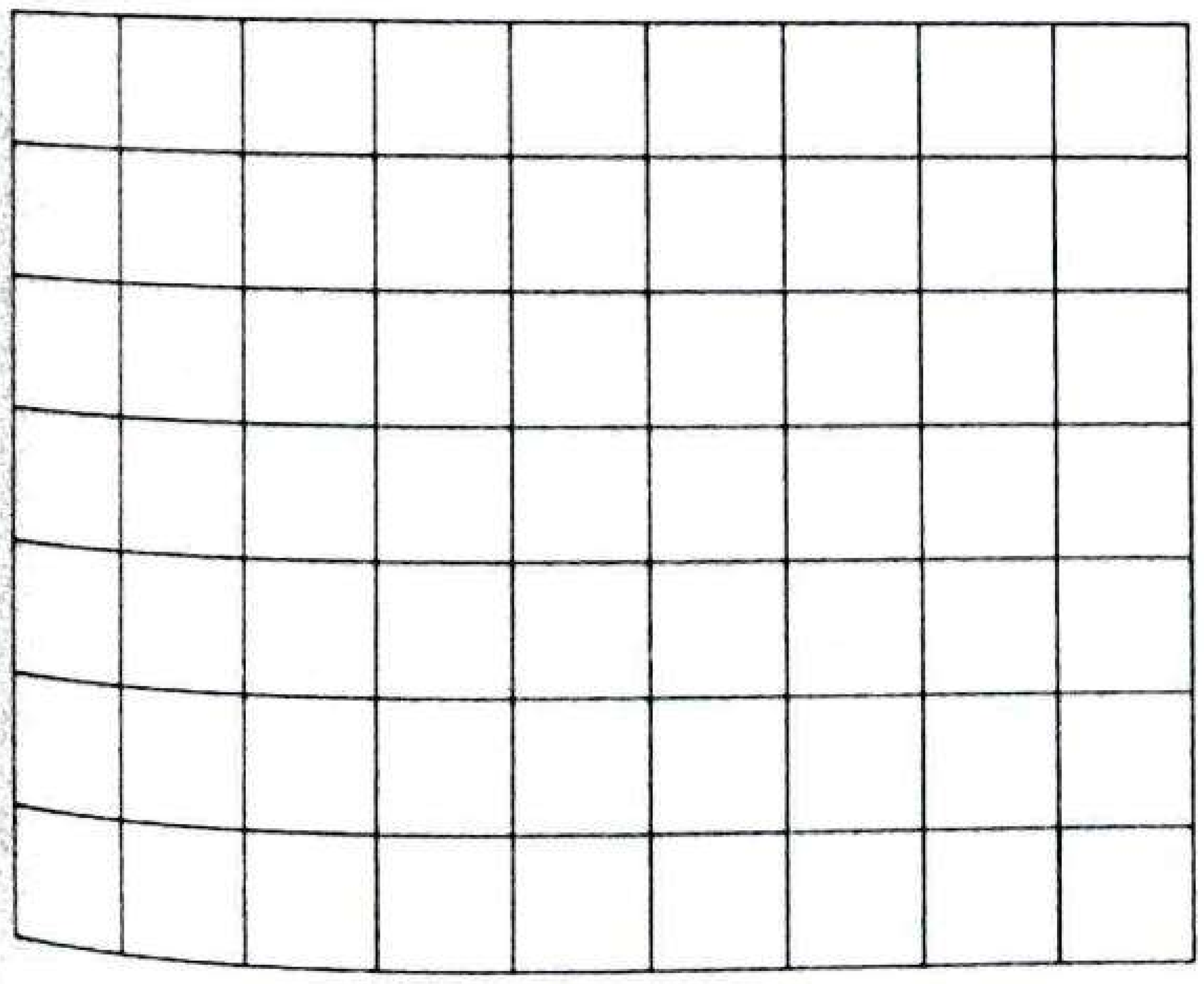

## Check

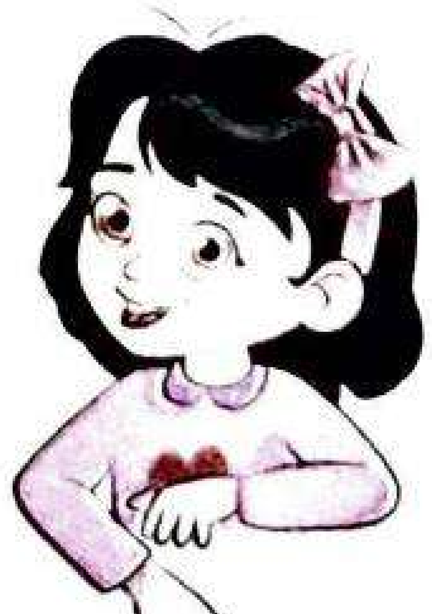
**Using the grid below, draw two rectangles have an area of 16 square units. Then find the perimeter of each rectangle.**





Perimeter = ........................ .





Perimeter = ........................ .

• Help your child to draw two rectangles with the same area.

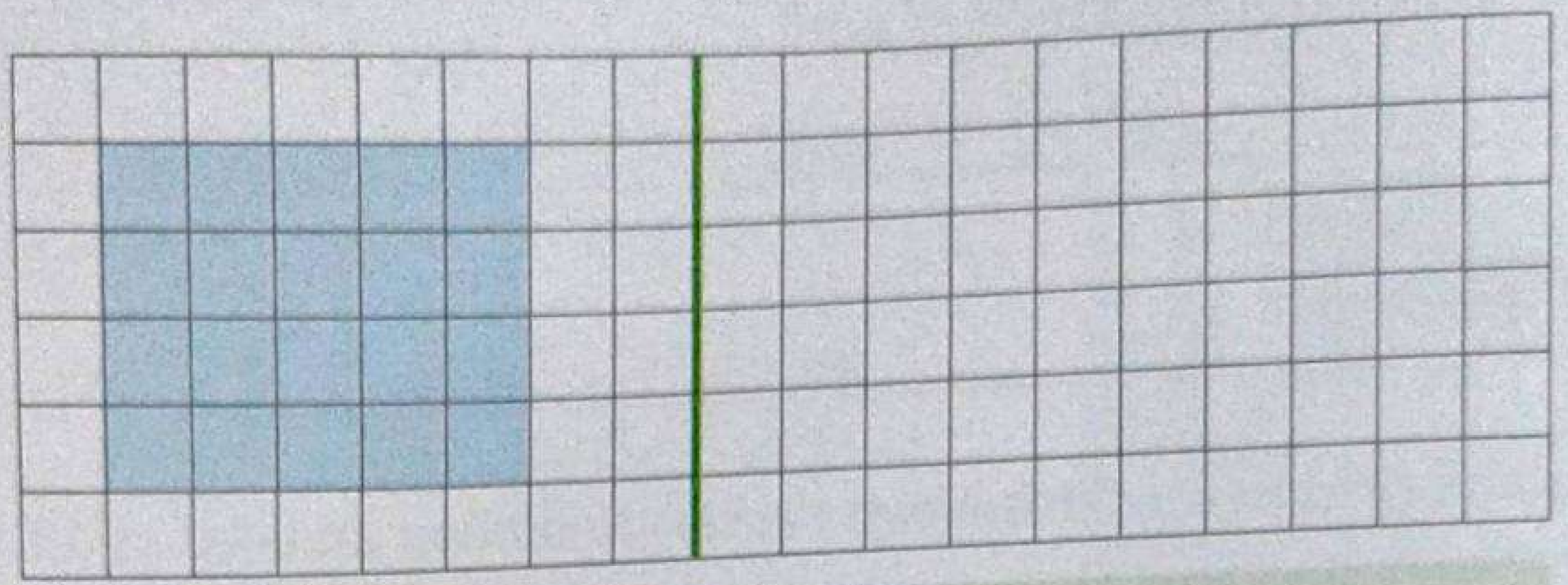




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## Practice

Find the area and the perimeter of the drawn rectangle. Then draw another rectangle with the same area but a different perimeter in each grid and calculate it.

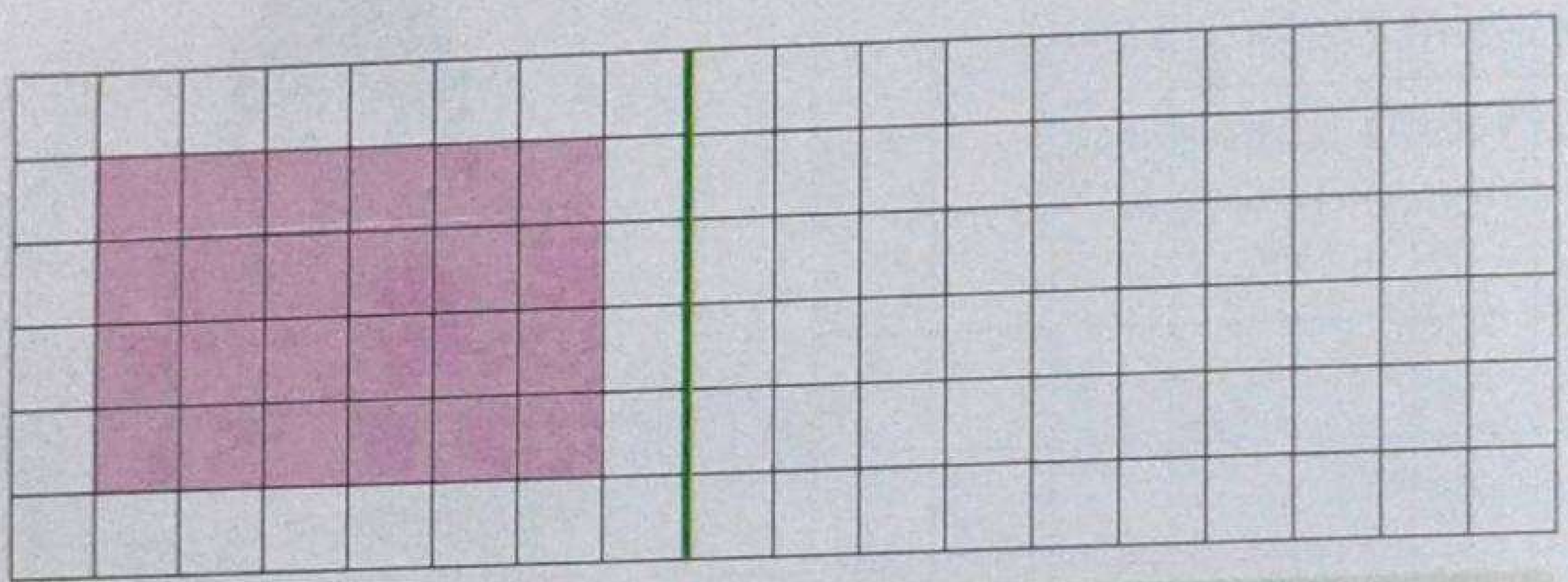


Area = ________________.

Perimeter = ________________.

Area = ________________.

Perimeter = ________________.

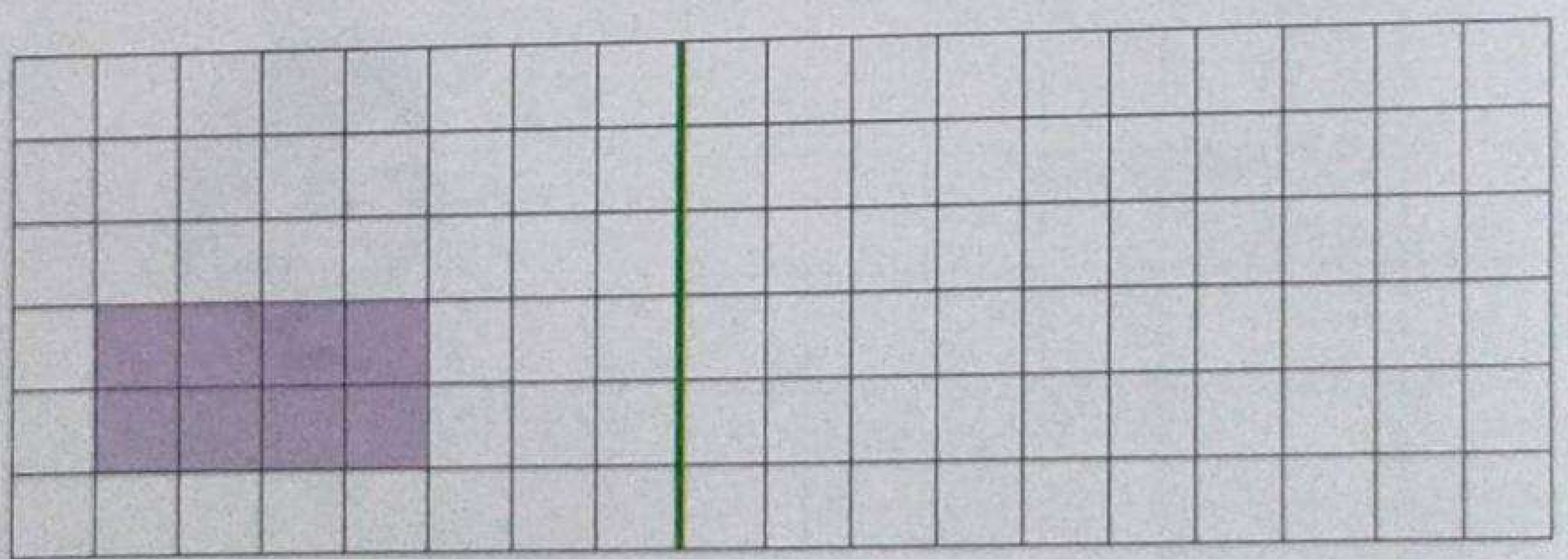


Area = ________________.

Perimeter = ________________.

Area = ________________.

Perimeter = ________________.



Area = ________________.

Perimeter = ________________.

Area = ________________.

Perimeter = ________________.

**Notes for parents**

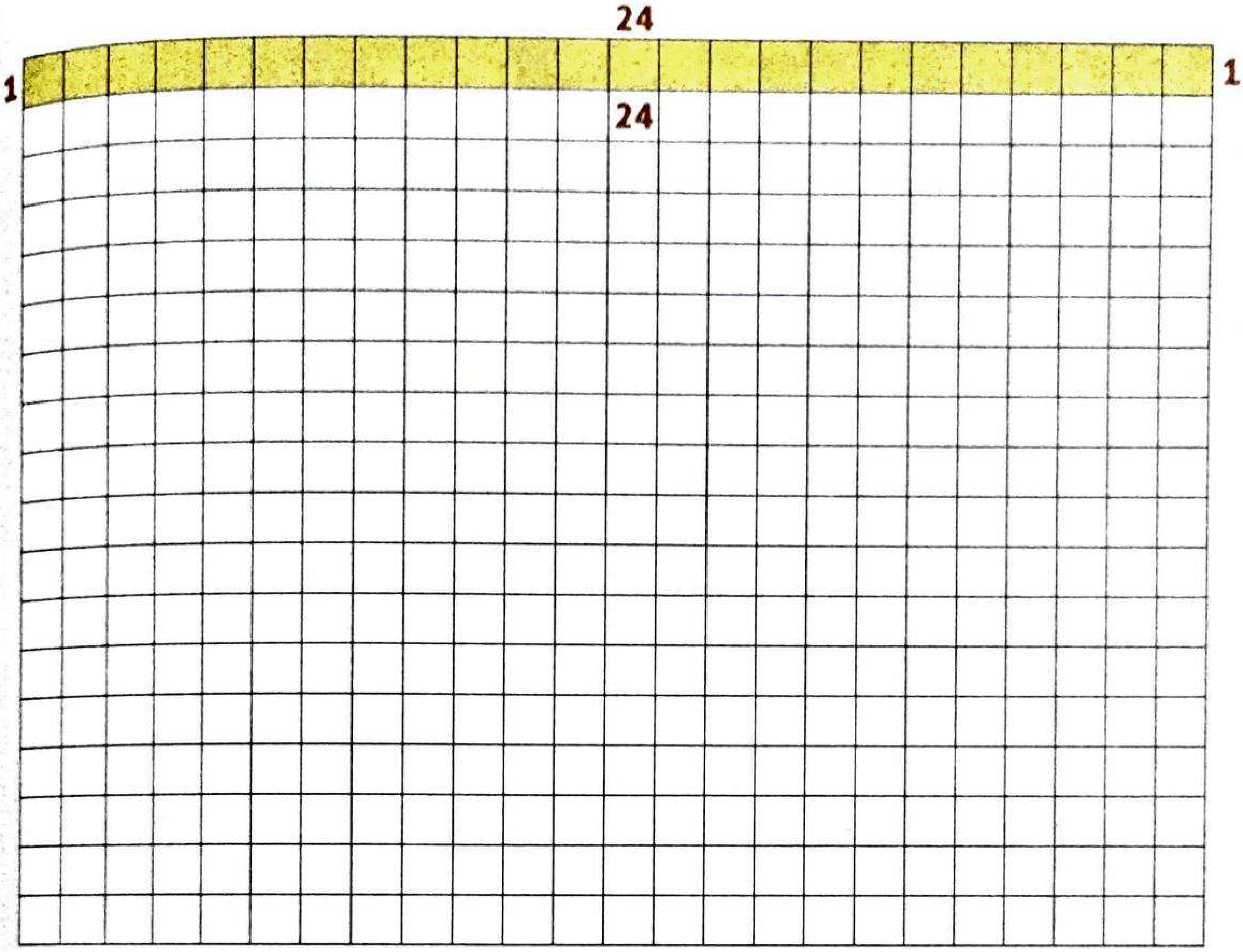
- Help your child to find area and perimeter of rectangle and draw another one with the same area.





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Draw 4 different rectangles with an area 24 square units. Then complete the table below. The first one is done for you.






| | Width (length units) | Length (length units) | Area (square units) | Perimeter (length units) |
|---|---|---|---|---|
| Rectangle 1 | 1 | 24 | 24 | 50 |
| Rectangle 2 | ...... | ...... | ...... | ...... |
| Rectangle 3 | ...... | ...... | ...... | ...... |
| Rectangle 4 | ...... | ...... | ...... | ...... |

• Encourage your child to calculate the perimeter and the area of his/her objects as books, notebook and ruler.




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Use your geometric tools to draw two different rectangles with an area of 10 square centimeters. Then find the perimeter of each one.



Side lengths are ______ , ______

Perimeter = ________ centimeters.

Side lengths are ______ , ______

Perimeter = ________ centimeters.

## Challenge

- Mariam made a frame of a picture with a perimeter of 18 cm and an area of 20 square cm. What are the lengths of the sides ? «Draw a figure to show your answer»

The side lengths are :

______ and ______

**Notes for parents**

- Help your child to draw two rectangles using ruler with the same area.





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## Learn Same perimeter, different area

- Shady is framing three pictures with the same perimeter 18 cm.
- Does he need the same number of square centimeters of glass for each picture ?

Ⓐ 7 cm, 2 cm



Ⓑ 6 cm, 3 cm



Ⓒ 5 cm, 4 cm

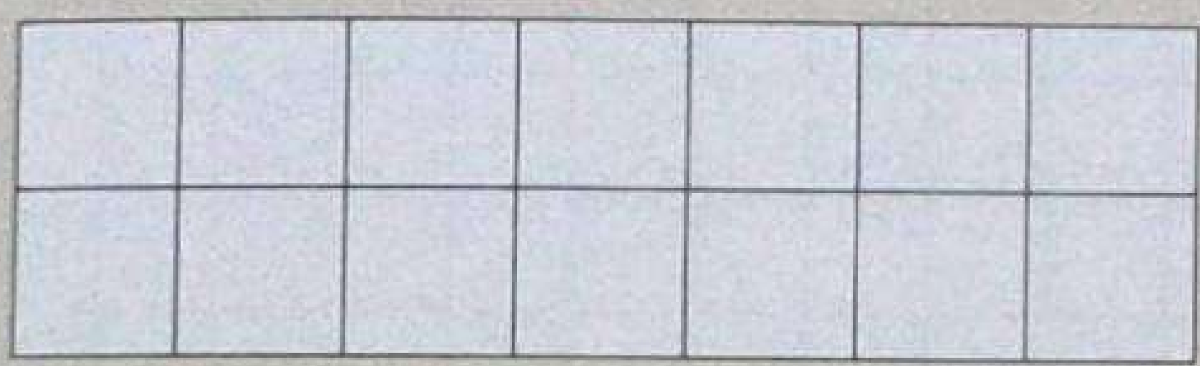


- **To find** how much glass he needs, find the area of each picture.

**Picture Ⓐ**

7

2

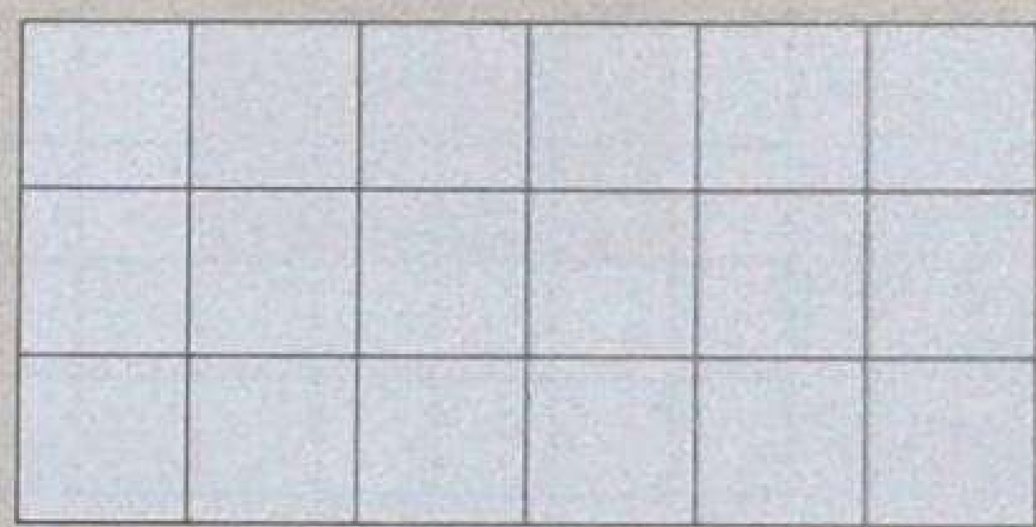


Area = **14** square cm

**Picture Ⓑ**

6

3

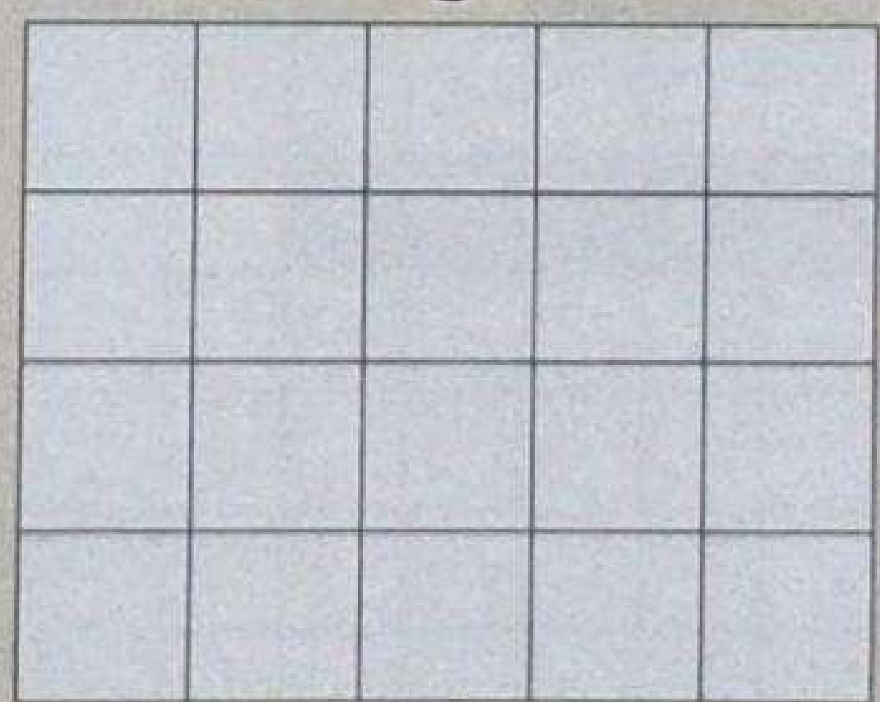


Area = **18** square cm

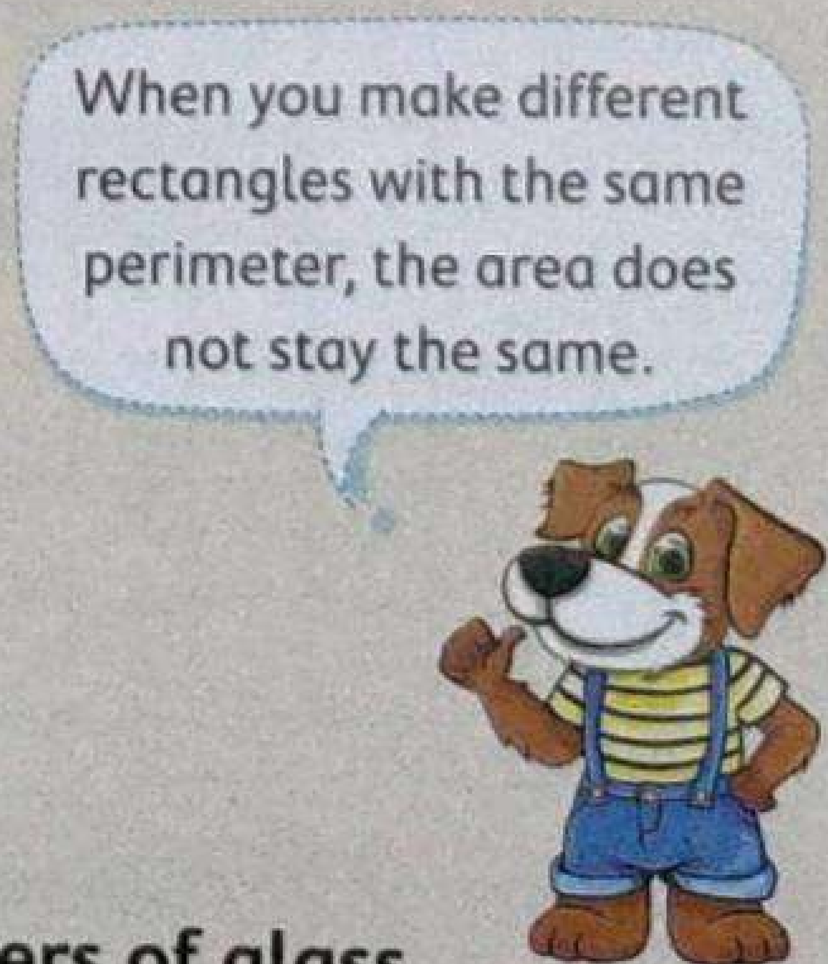
**Picture Ⓒ**

5

4



Area = **20** square cm




- **So, Shady needs different number of square centimeters of glass.**

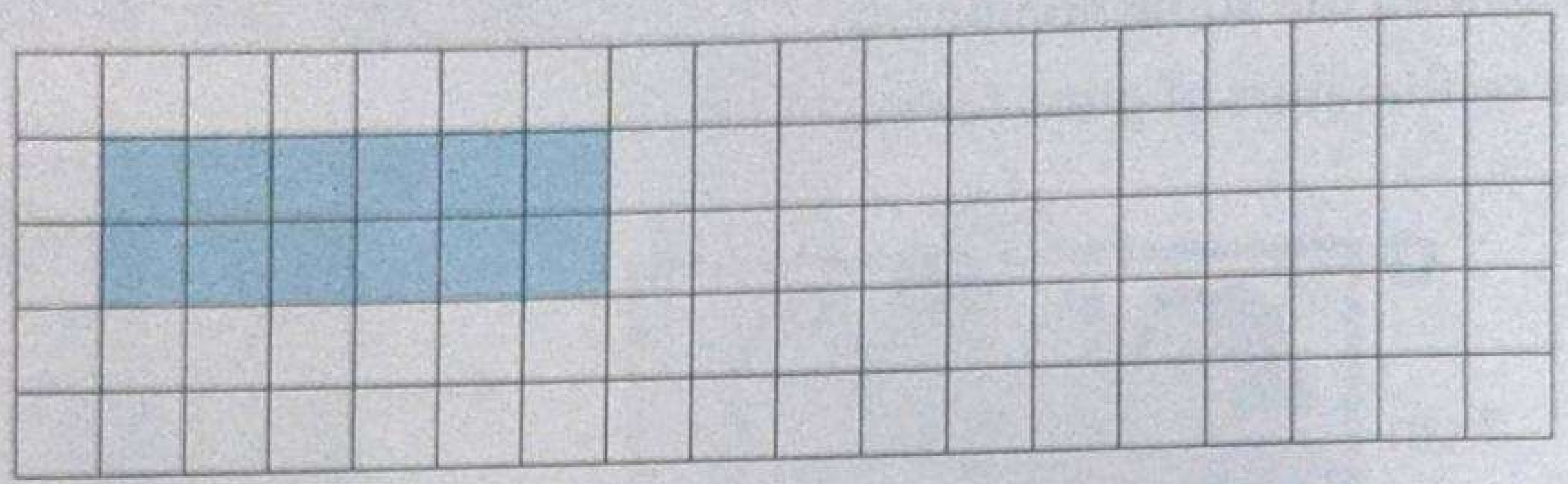




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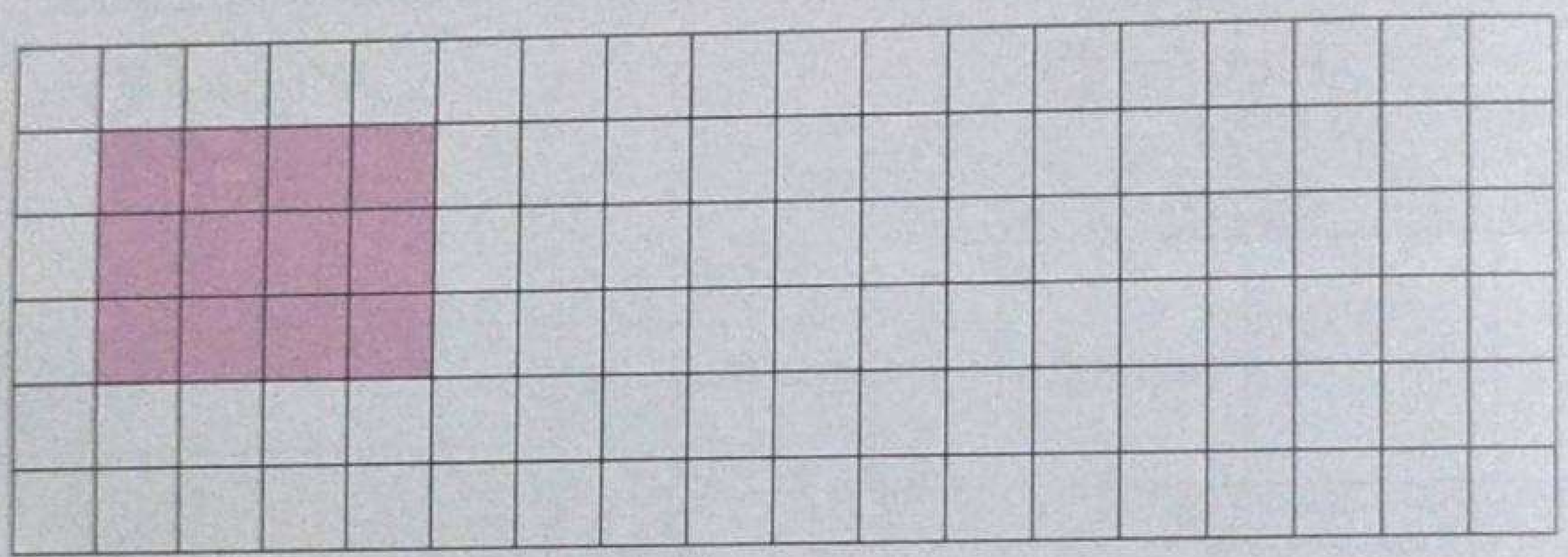
## Practice

Find the area and the perimeter of the drawn rectangle. Then draw another rectangle with the same perimeter but a different area in each grid and calculate it.



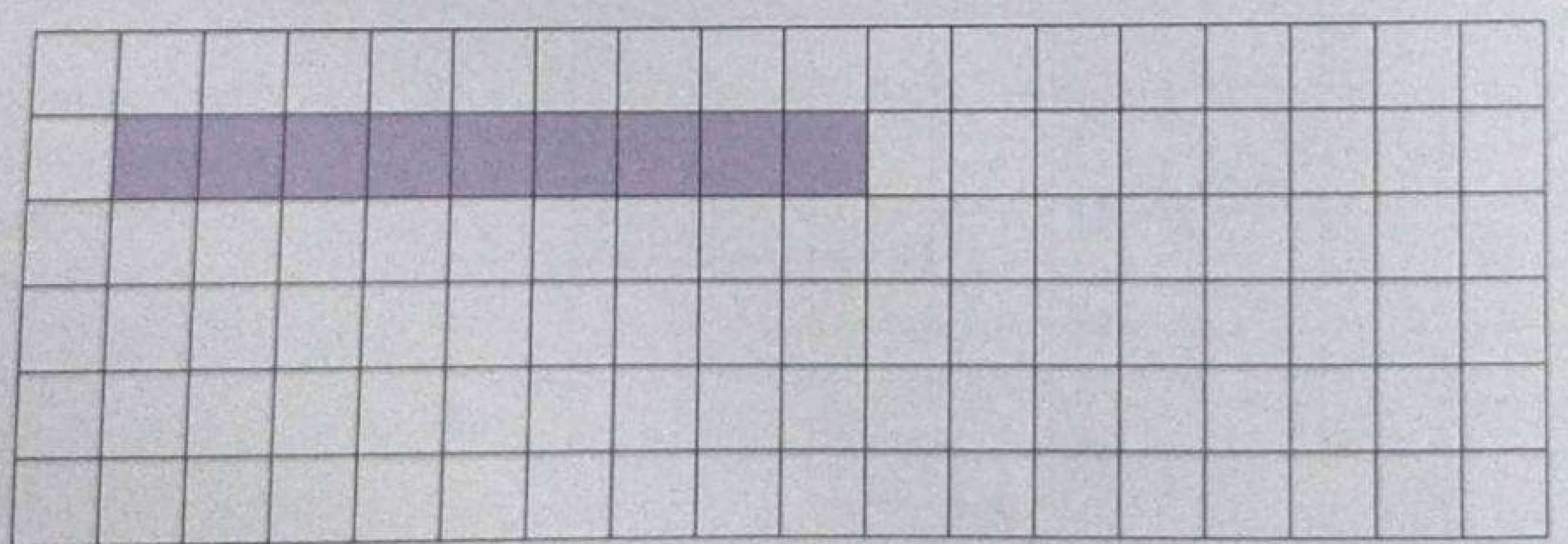
Area = ______________.
Perimeter = ______________.

Area = ______________.
Perimeter = ______________.



Area = ______________.
Perimeter = ______________.

Area = ______________.
Perimeter = ______________.



Area = ______________.
Perimeter = ______________.

Area = ______________.
Perimeter = ______________.

**Notes for parents**

- Help your child to draw a rectangle with the same perimeter of the given.





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Use your geometric tools to draw different rectangles with a perimeter of **22** centimeters. Then find the area of each one.



Side lengths are ________ , ________ .

Area = ____________ square cm

Side lengths are ________ , ________ .

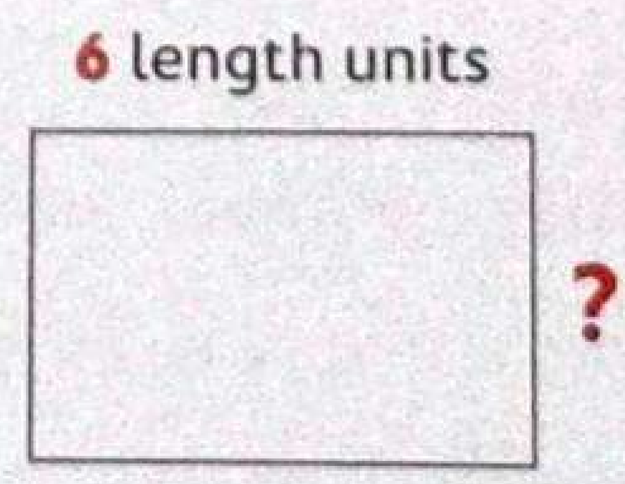
Area = ____________ square cm

## Challenge

- Find the missing side length in the opposite rectangle.

______________________________

______________________________




• Help your child to know the dimensions of a rectangle if he/she knows the perimeter and find other solutions.

Place a smiley face





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# Lesson 49

# Area and perimeter story problems

## Learn




Yara wants to put a lace border around her picture of dimensions 3 cm and 5 cm.

How long of lace border does she need ?

- Determine whether you would find perimeter or area.

  Find the perimeter.

- Write a number sentence to solve.

  Perimeter = 5 + 3 + 5 + 3 = 16 cm

  So, Yara needs **16 cm** of lace border.

I can use different ways to find the perimeter.

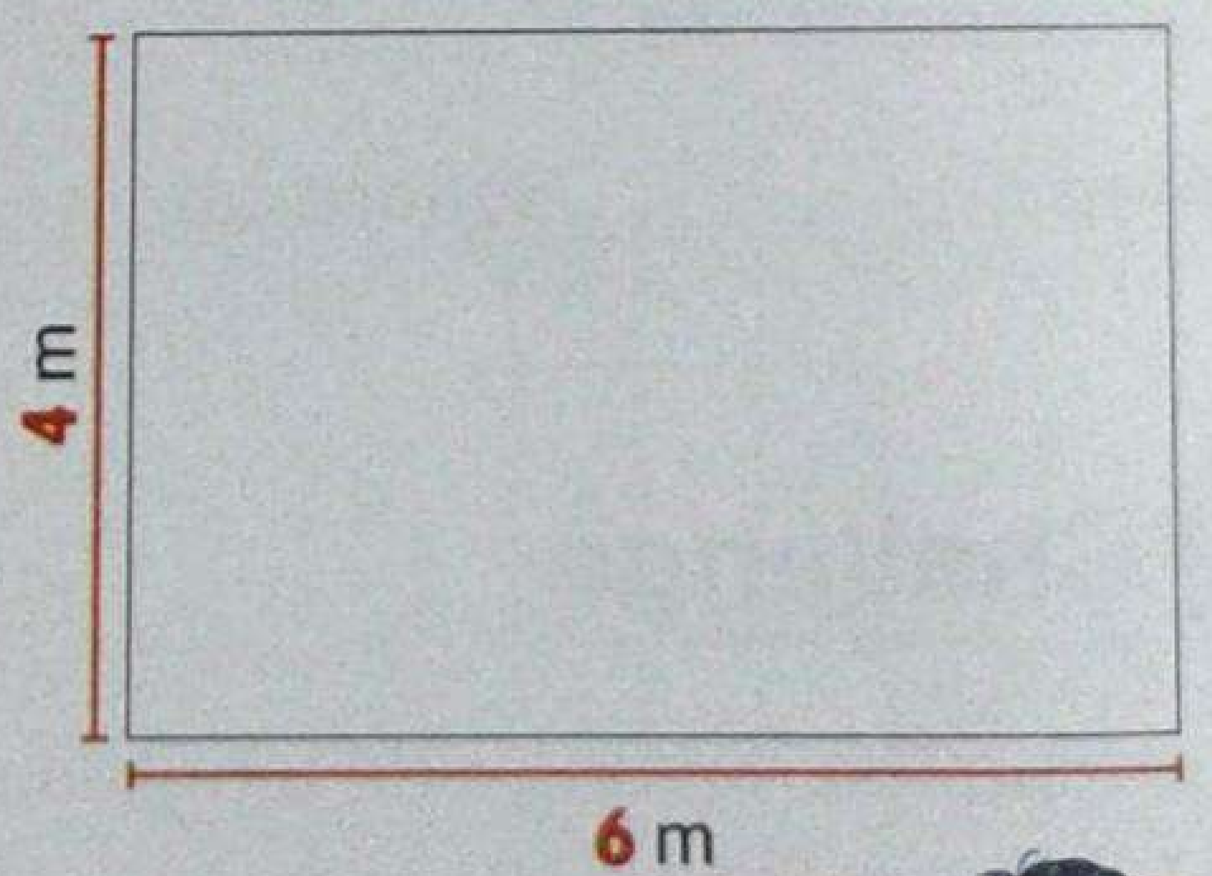


---

Wael's family tiled the floor in their front hall of dimensions 6 m and 4 m.
They used square tiles that measure 1 m on each side.



How many tiles did they use ?




- Determine whether you would find perimeter or area.

  Find the area.

- Write a number sentence to solve.

  Area = 6 × 4 = 24 square meters

  So, they used **24 square meters** of tiles.

I can use different ways to find the area.



**Notes for parents**

• Help your child to find area and perimeter of carpet in his/her room.




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## Check

**Tell whether you would find perimeter or area in each situation.**

- You need wood to frame a picture. ( ________ )
- You need wall-to-wall carpeting. ( ________ )
- You need paint to cover four walls. ( ________ )
- You need a hose to go around the house. ( ________ )

## Practice

**Read and solve each of the following story problems. You can draw a figure for help.**



Mina built a backyard pen for his puppy.

The length of the pen was 3 meters and the width was 2 meters.

**What is the area of the pen ?**

______________________________

______________________________

______________________________



Marian wants to tile the kitchen floor.

If the floor is 4 meters long and 3 meters wide.

**How many one meter square tiles will she need ?**

______________________________

______________________________

______________________________

•Help your child to know the meaning of each story problem in this page.

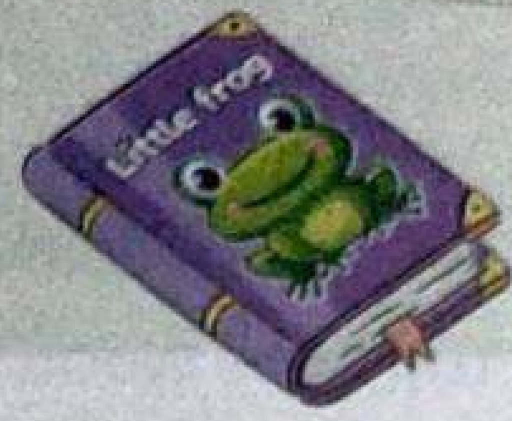




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A book had a length of 20 cm and a width of 12 cm.

**What is the perimeter of the book ?**




Omar is a farmer. His farm is 250 m long and 150 m wide. He wants to install a fence all around his farm.

**What is the length of the fence ?**



Lina's square bedroom has a length of 4 meters.

**How much carpet will Lina need to cover the floor of her bedroom ?**



## Challenge

- Kareem's school playground is 75 m long and 40 m wide. Ali's school playground is 90 m long and 30 m wide. Kareem and Ali finished a round jogging around their school playgrounds. Who jogged longer ? Explain your answer.

**Notes for parents**

- Help your child to know that for calculating the distance around school playground he/she should find the perimeter of it.





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Write your perimeter story problem and solve it.



Write your area story problem and solve it.



• Help your child to write story problems includes finding perimeter or area of a rectangular shape.

Place a smiley face





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Lesson **50**

# Multiplying by multiples of 10

## Learn — Multiplying by multiples of 10

**How to find the product of 3 x 40.**

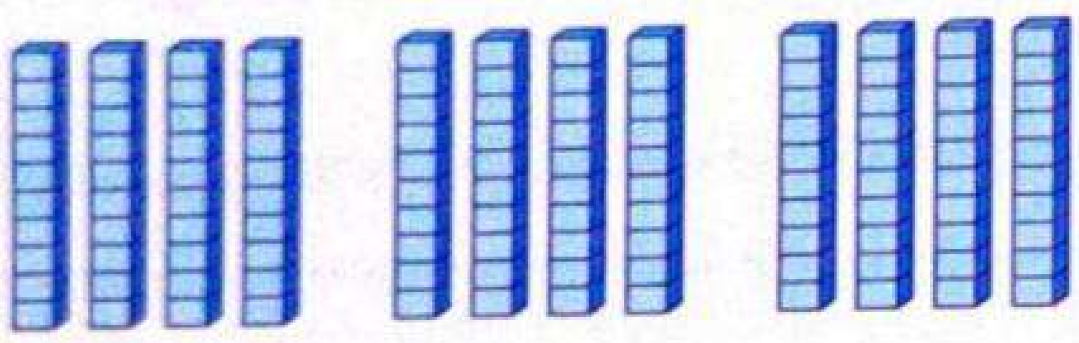
It is easy to multiply whole numbers by multiples of 10 using the following strategies.

*Notice that*
*3 x 4 = 12*
*is a multiplication fact*

Remember
= 1
= 10

### First strategy

Draw place value blocks which represent 3 groups of 40



3 groups of 40

$3 \times 4$ tens $= 120$

$3 \times 40 = 120$

*Math tip*
*You can count by 10s to find the product.*

### Second strategy

Break apart the multiples of 10 as two factors (the number x 10)

then $40 = 4 \times 10$

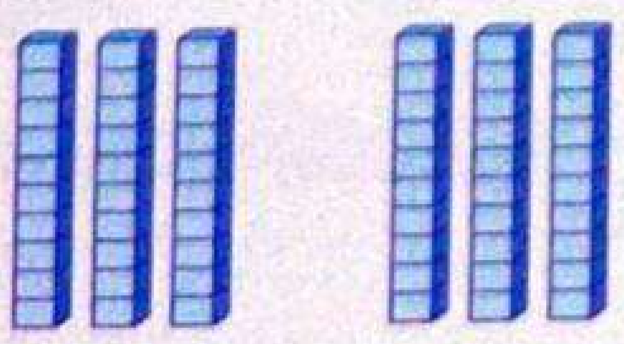
So, $3 \times 40 = (3 \times 4) \times 10$

$= 12 \times 10 = 120$

*Math tip*
*You can multiply*
*3 x 4 = 12*
*and put the zero at the end "120"*

## Check

**Complete.**



2 groups of ☐

$2 \times$ ☐ tens = ☐ tens

$2 \times$ ☐ = ☐

$2 \times$ ☐ $\times 10 =$ ☐ $\times 10 =$ ☐

**Notes for parents**

• Help your child to recognize the two strategies and ask him/her to multiply 4 x 50 using the strategies.





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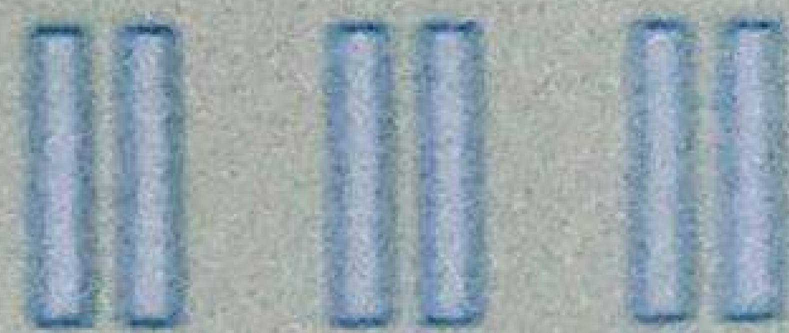
Complete the following. You may use place value blocks to help. The first one is done for you.



Work area

3 × 2 tens = [ 6 ] tens

3 × 20 = [ 60 ]



---

4 × 3 tens = [ ___ ] tens

4 × 30 = [ ___ ]

---

2 × 5 tens = [ ___ ] tens

2 × 50 = [ ___ ]

---

3 × 6 tens = [ ___ ] tens

3 × 60 = [ ___ ]

---

4 × 7 tens = [ ___ ] tens

4 × 70 = [ ___ ]

---

6 × 4 tens = [ ___ ] tens

6 × 40 = [ ___ ]

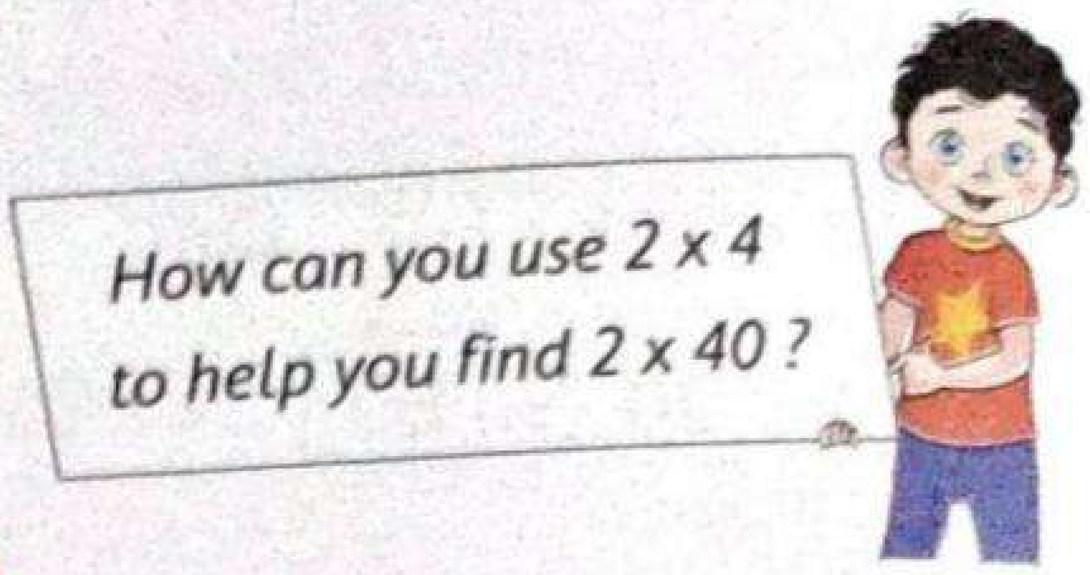
* Ask your child to use place value blocks to help him/her to find the product of 10 x 10.





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Complete the following. Solve the problems. The first one is done for you.




| | |
|---|---|
| 2 × 40<br>=( 2 × 4 ) × 10 = 8 × 10 = 80 | |
| 4 × 50<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ | 8 × 20<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ |
| 7 × 70<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ | 9 × 90<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ |
| 3 × 60<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ | 4 × 90<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ |
| 6 × 20<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ | 7 × 40<br>=( ___ × ___ ) × 10 = ___ × ___ = ___ |

Solve the following problems using any strategy.

5 × 30 = ______

9 × 40 = ______

7 × 20 = ______

3 × 30 = ______

6 × 50 = ______

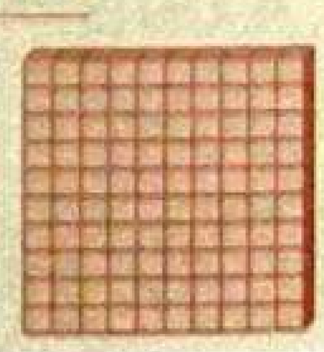
4 × 80 = ______

## Challenge

- Solve the problem : 3 × 200

______________________________

Hint


= 100

Notes for parents

• Ask your child to solve the problem 12 x 10 using any strategy.

Place a smiley face

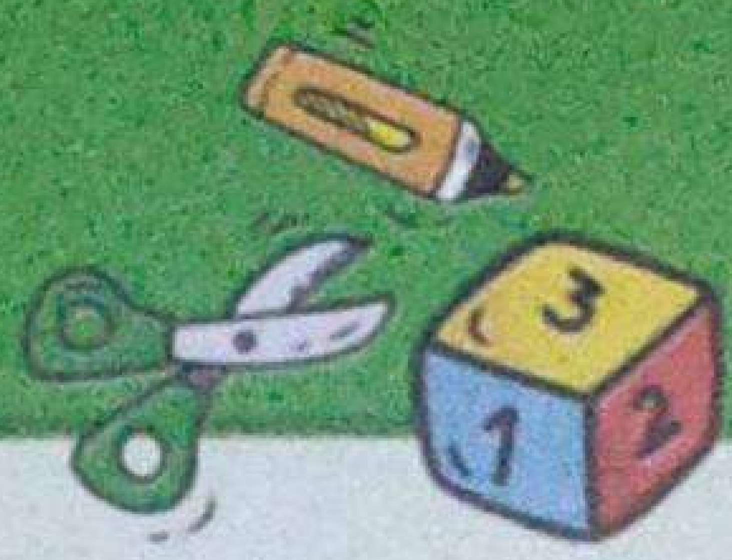




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# Activity

## Chapter 5



## The Bunn Zoo




- Calculate the perimeter and the area of each animal pen.

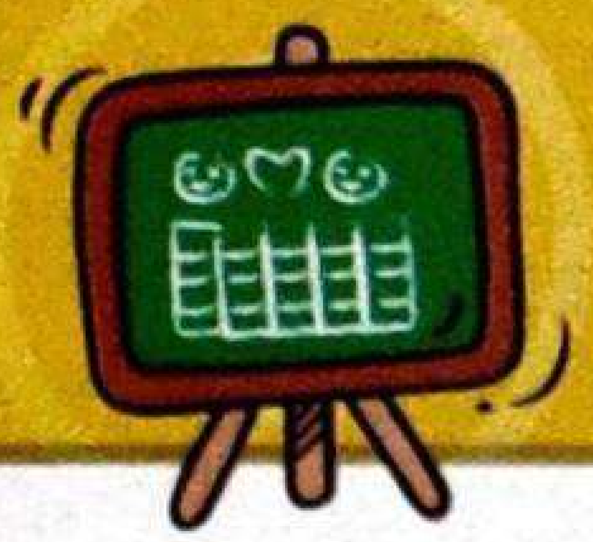
| Animal | Perimeter | Area |
|---|---|---|
| Giraffe | ____ Units | ____ Square units |
| Lion | ____ Units | ____ Square units |
| Elephant | ____ Units | ____ Square units |
| Hippo | ____ Units | ____ Square units |
| Panda | ____ Units | ____ Square units |
| Seal | ____ Units | ____ Square units |

| Animal | Perimeter | Area |
|---|---|---|
| Rhino | ____ Units | ____ Square units |
| Koala | ____ Units | ____ Square units |
| Tiger | ____ Units | ____ Square units |
| Zebra | ____ Units | ____ Square units |
| Monkey | ____ Units | ____ Square units |





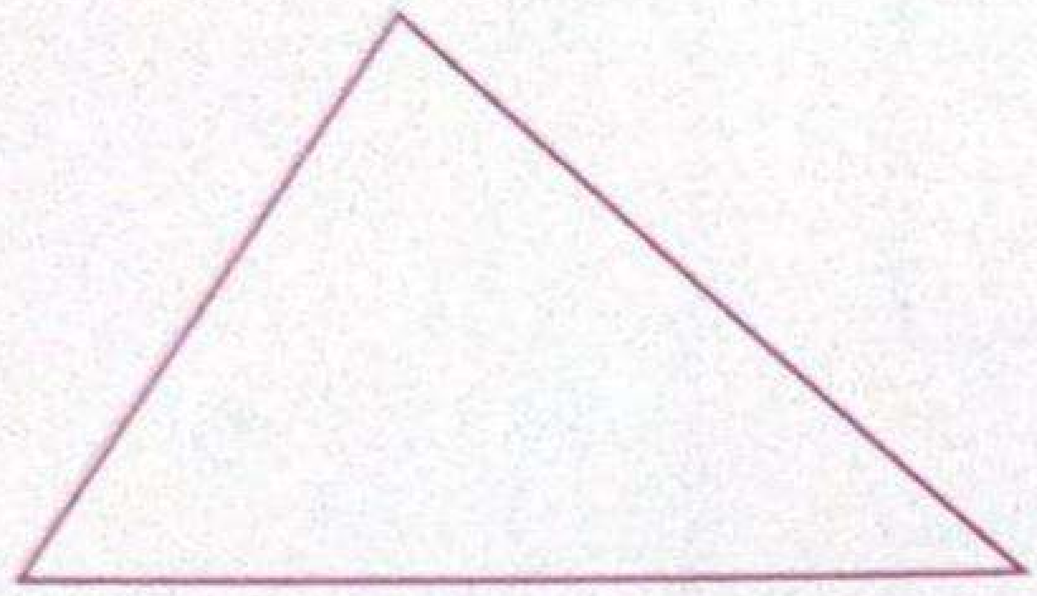
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# Extra Practice

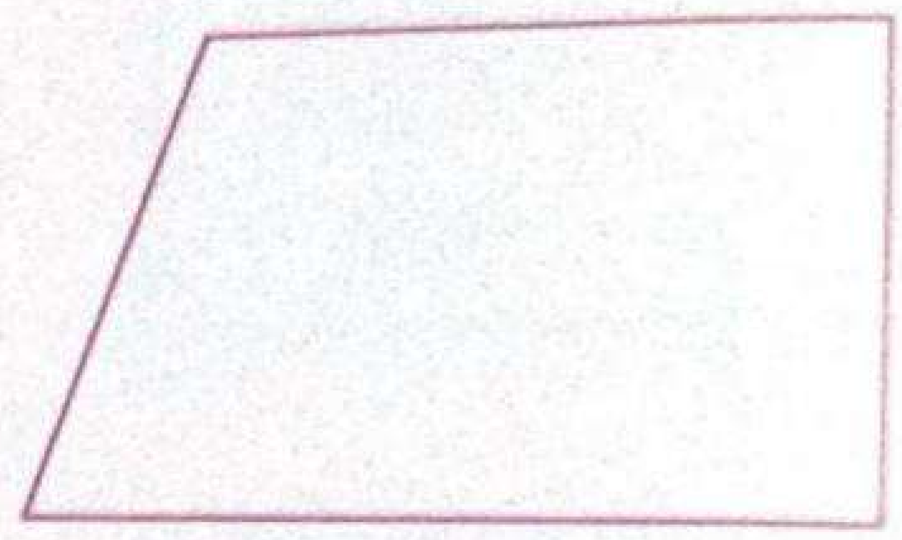
## Chapter 5

**1** Using your ruler, measure each side length. Then find the perimeter of the figure.



Perimeter = ____ + ____ + ____

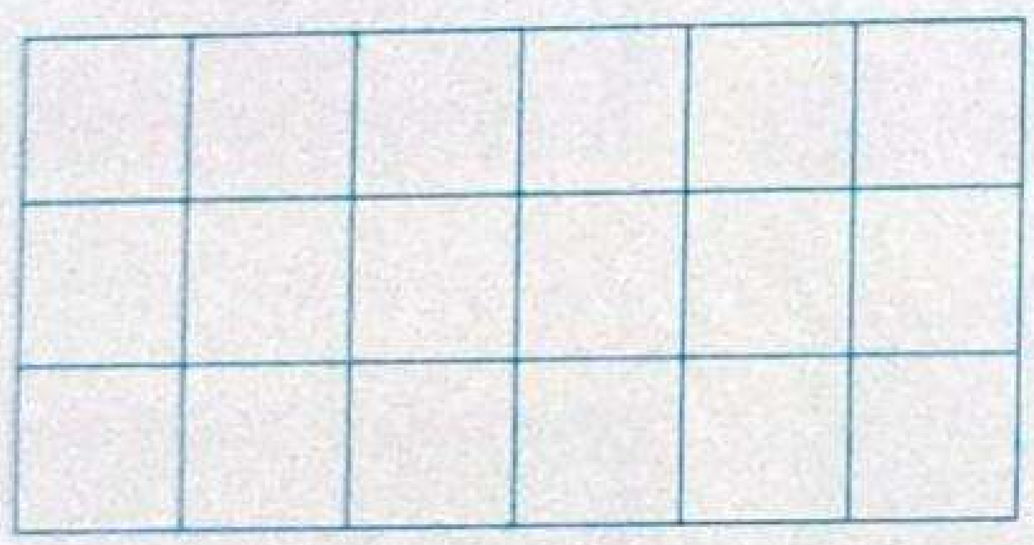
= ____ cm.



Perimeter = ____ + ____ + ____ + ____

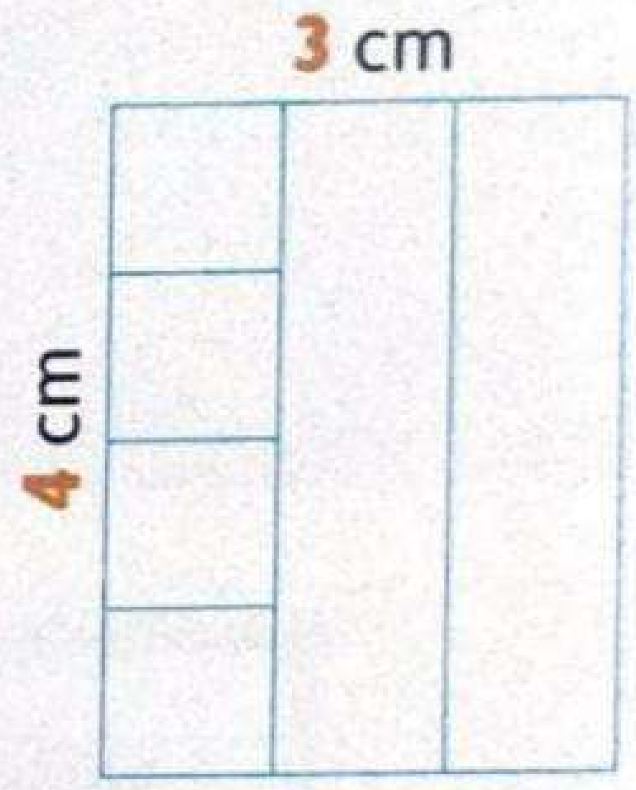
= ____ cm.

**2** Calculate the perimeter and the area of each of the following figures.



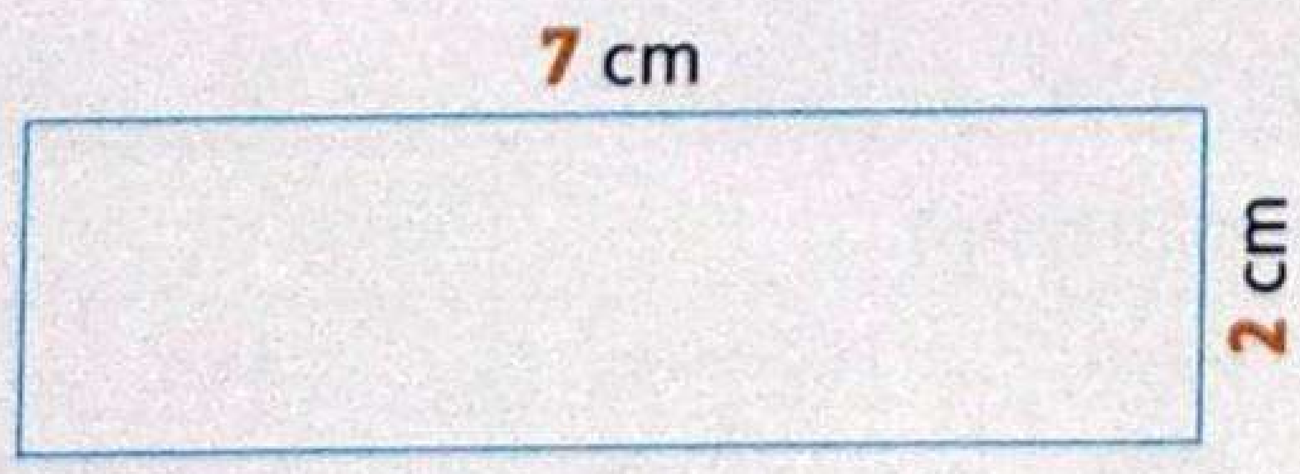
Perimeter = ____ units

Area = ____ square units



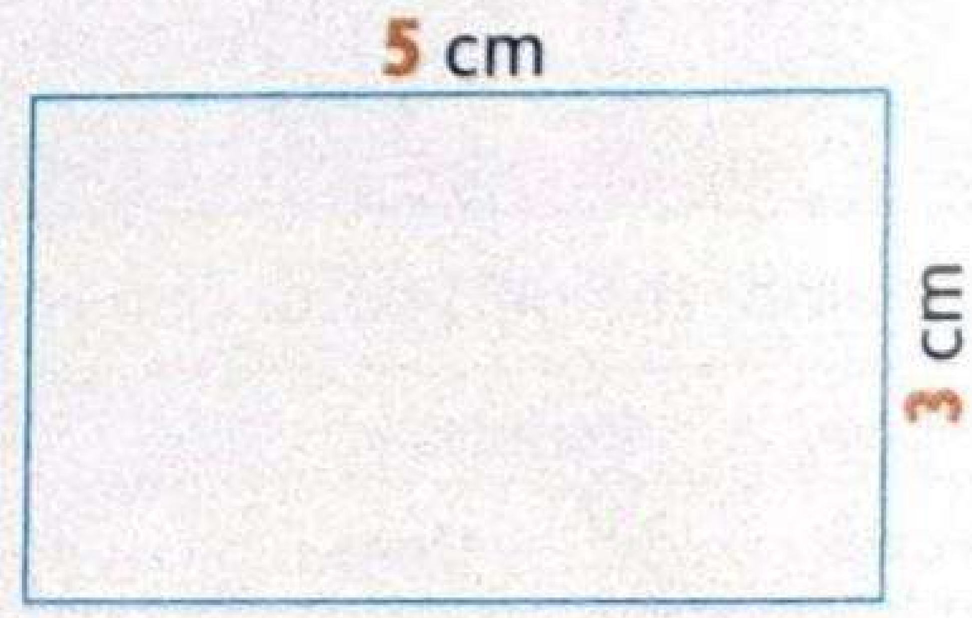

Perimeter = ____ cm

Area = ____ square centimeters




Perimeter = ____ cm

Area = ____ square centimeters




Perimeter = ____ cm

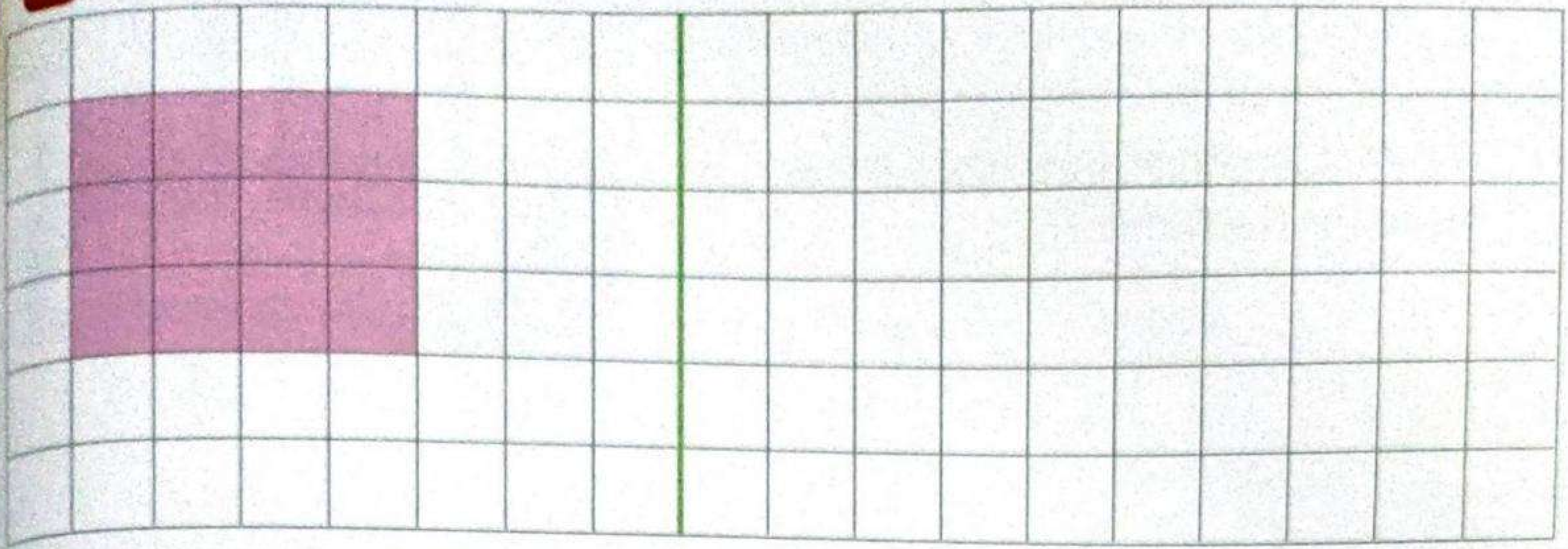
Area = ____ square centimeters



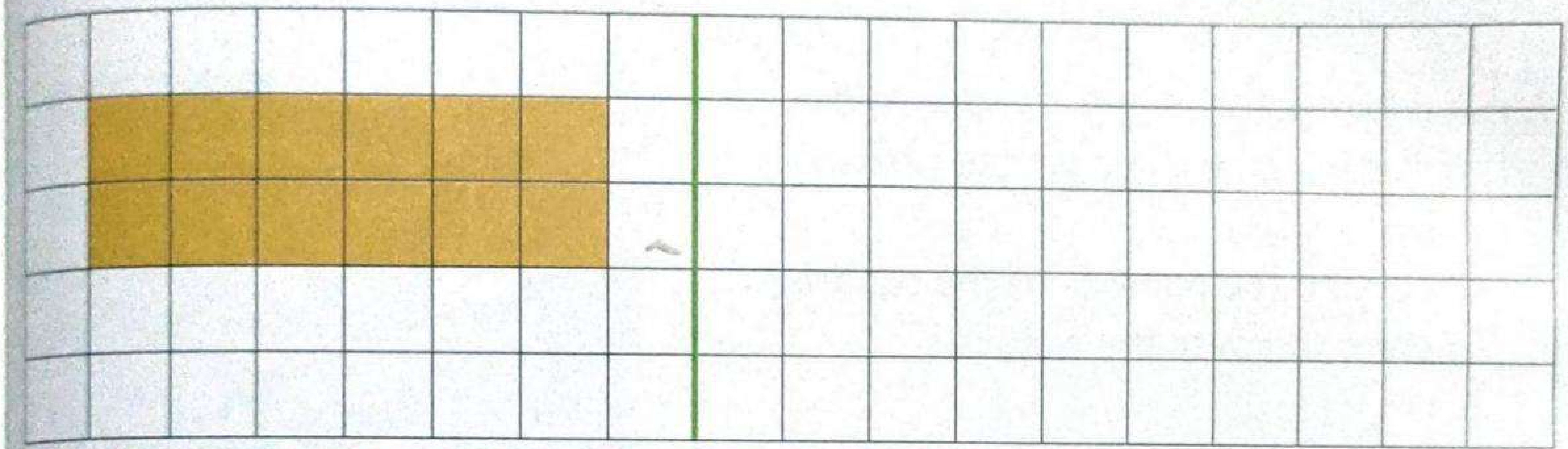
• In this practice your child will review on all what he/she had learned in chapter 5.


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**3** Draw a rectangle of the same area of the drawn rectangle in the grid.



**4** Draw a rectangle of the same perimeter of the drawn rectangle in the grid.



**5** Draw 3 different rectangles of the same area 18 square units in the grid, then complete the table.

| | Length (Linear units) | Width (Linear units) | Area (Square units) | Perimeter (Linear units) |
|---|---|---|---|---|
| Rectangle 1 | | | | |
| Rectangle 2 | | | | |
| Rectangle 3 | | | | |





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**6** Maher wants to make a wooden frame around the window of his room which is 2 m long and 1 m wide,
**so what length of wood does Maher need for the frame ?**



---

**7** A room wall is 5 meters long and 3 meters wide to be pasted with wallpaper.
**Calculate the number of the square meters to cover the wall.**



---

**8** **Find the product.**

| | |
|---|---|
| 4 x 20 = ____ | 9 x 50 = ____ |
| 8 x 30 = ____ | 2 x 90 = ____ |
| 60 x 3 = ____ | 7 x 40 = ____ |



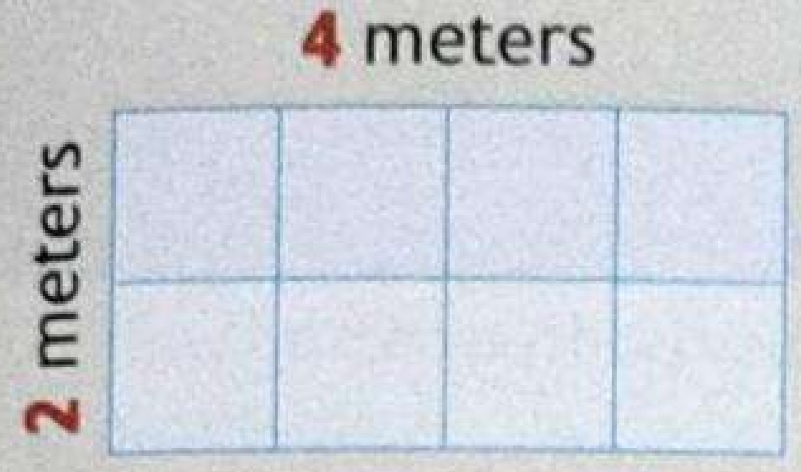




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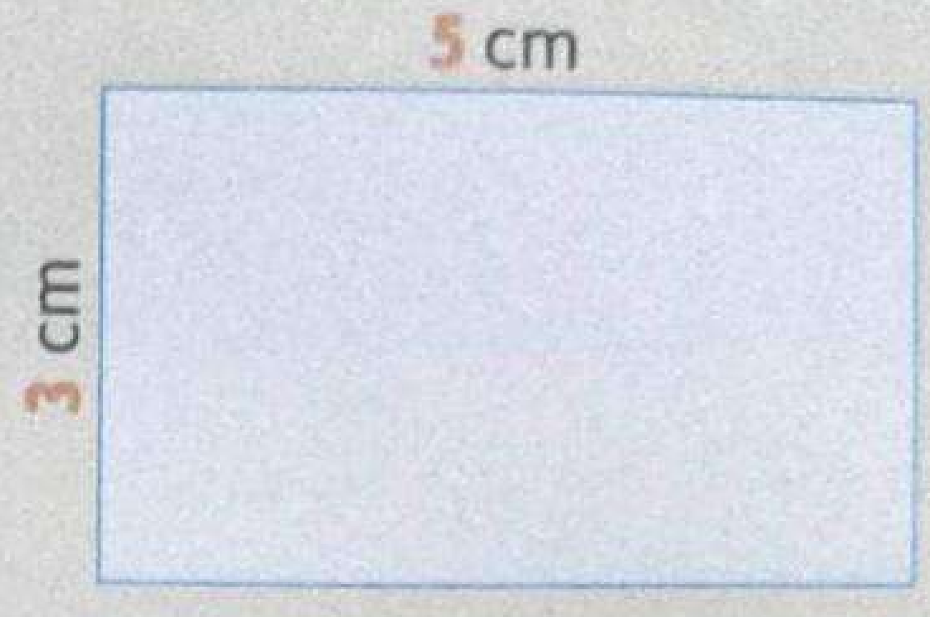
# Assessment
## Chapter 5

**1** Find the perimeter and the area of each of the following shapes.




Perimeter = ______ meters

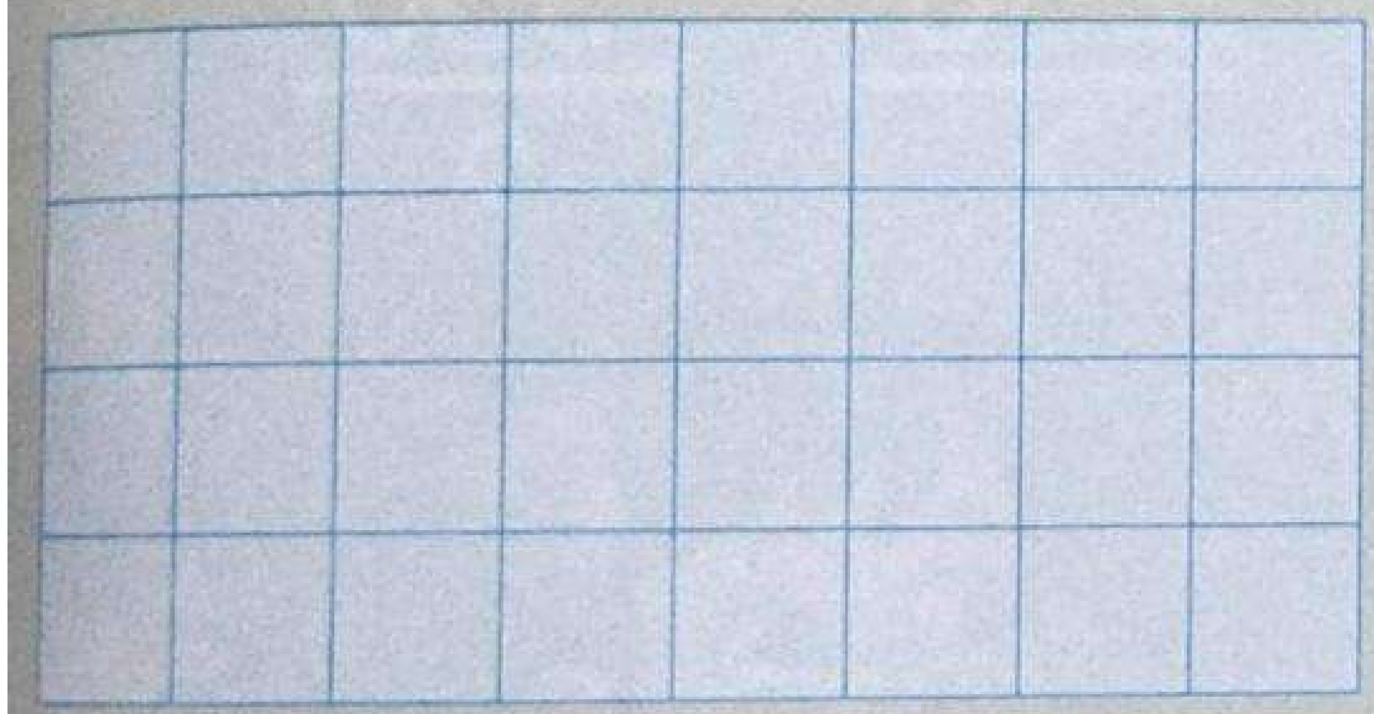
Area = ______ square meters



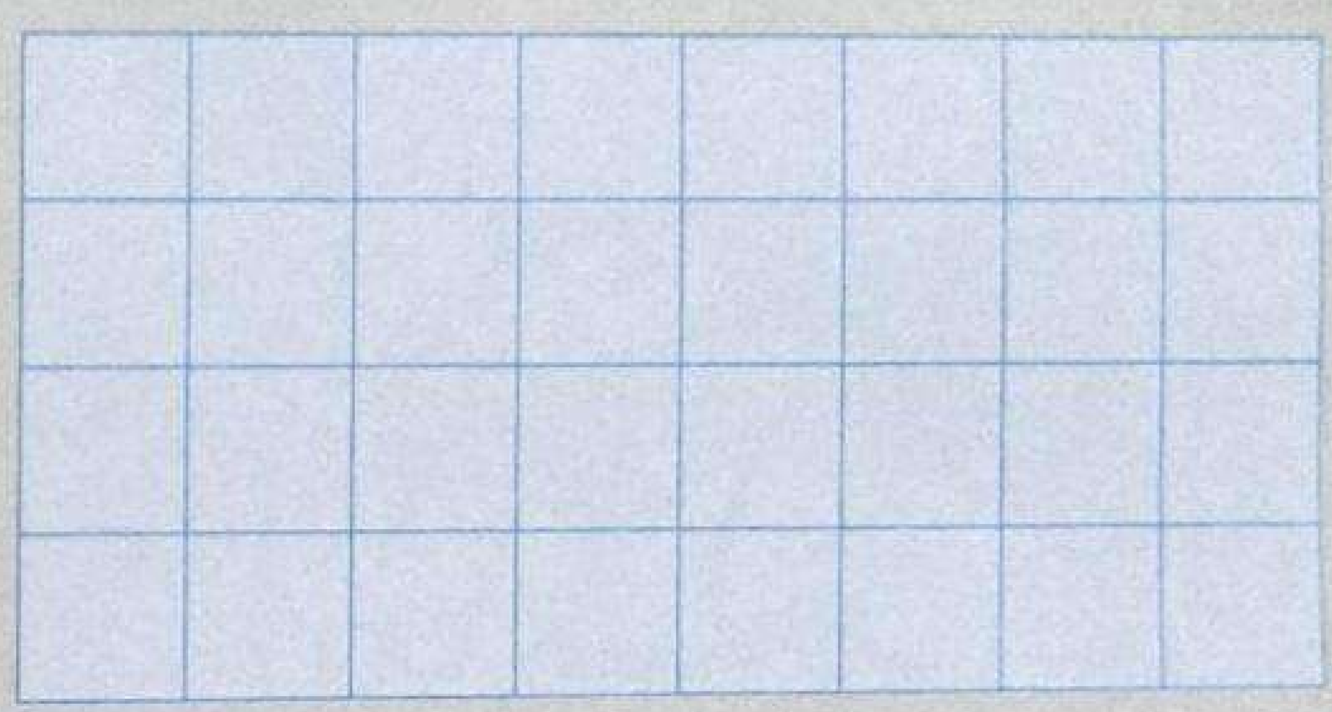

Perimeter = ______ meters

Area = ______ square meters

**2** Draw a rectangle of perimeter 10 length units in the grid.



**3** Draw a rectangle of area 8 square units in the grid.



**4** Join the equal products.

| | |
|---|---|
| $3 \times 40$ • | • $4 \times 40$ |
| $9 \times 20$ • | • $6 \times 10$ |
| $30 \times 2$ • | • $6 \times 30$ |
| $2 \times 80$ • | • $60 \times 2$ |

**5** Mona is sewing a border on a baby blanket. The length of the blanket is 40 cm and the width is 30 cm.

**How long will the border be ?**

______________________

______________________

______________________







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# Chapter 6




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## Outcomes

**At the end of chapter six, your child will be able to:**

**Lesson 51**

- Explain patterns observed when multiplying by multiples of 10.

**Lesson 52**

- Investigate and apply patterns and strategies when multiplying by 9.
- Teach others one strategy for multiplying by 9.

**Lesson 53**

- Identify patterns in multiplication and addition facts.
- Explain how patterns observed in multiplication and addition facts can be helpful when solving problems.
- Apply strategies to solve addition and multiplication facts quickly and accurately.

**Lesson 54**

- Identify and describe patterns in the place value system up to the hundred thousands place.
- Apply strategies for ordering numbers.

**Lessons 55 & 56**

- Apply a variety of strategies to solve addition problems.
- Explain the importance of learning different problem-solving strategies.
- Estimate the sum of two 3-digit numbers.
- Apply a variety of strategies to add two numbers up to four digits.

**Lesson 57**

- Explain the relationship between addition and subtraction.
- Apply strategies to subtract two numbers up to four digits.
- Use addition to check answers to subtraction problems.

**Lesson 58**

- Apply strategies to solve addition and subtraction story problems.
- Reflect on learning to identify areas of strength and opportunities for growth.

**Lessons 59 & 60**

- Define volume as the measurement of the capacity of a container.
- Explain the relationship between milliliters and liters.
- Estimate the size of a milliliter of water.
- Identify the best unit to measure the capacity of a given container.
- Read volume measurements on a standard labeled container.
- Write what he/she has learned about capacity.

## Key vocabulary

- Multiple
- Place value
- Ten thousands place
- Order
- Number line
- Estimation
- Liter
- Factor
- Value
- Hundred thousands place
- Addition
- Decompose
- Tables
- Milliliter
- Addition facts
- Hundreds place
- Regrouping
- Sum
- Difference
- Multiplication facts
- Thousands place
- Compare
- Strategy
- Data
- Capacity

Lesson **51**

# Multiplication strategies

## Learn

**Multiplication facts and place value patterns can help you multiply.**

**For example :**

If you know **2 × 4 = 8**, then you can use mental math to find 2 × 40 , 2 × 400 and 2 × 4,000

**2 × 4 = 8** ← multiplication fact

**2 × 40 = 80**

**2 × 400 = 800**

**2 × 4,000 = 8,000**

*Math tip*

*As the numbers of zeroes in the factor increases, the number of zeroes in the product increases.*



## Check

If you know **7 × 2 = 14** find the following.

| | | |
|---|---|---|
| 7 × 20 = ____ | 7 × 200 = ____ | 7 × 2,000 = ____ |

## Practice

Complete the following.

| | | |
|---|---|---|
| 2 × 3 ____ | 7 × 4 ____ | 5 × 6 ____ |
| 2 × 30 ____ | 7 × 40 ____ | 5 × 60 ____ |
| 2 × 300 ____ | 7 × 400 ____ | 5 × 600 ____ |
| 2 × 3,000 ____ | 7 × 4,000 ____ | 5 × 6,000 ____ |

**Notes for parents**

• Ask your child to find the product of 5 × 300 using multiplication fact and patterns.

## Learn

**How to find 5 × 30.**

**Here are some strategies to use.**

*These strategies can be used when multiply by hundreds and thousands.*



### First strategy

Use the multiplication fact and patterns to help you multiply.

Where → $5 \times 3 = 15$

Then → $5 \times 30 = 150$

### Second strategy

Break apart the multiples of 10 as two factors "30 = 3 × 10"

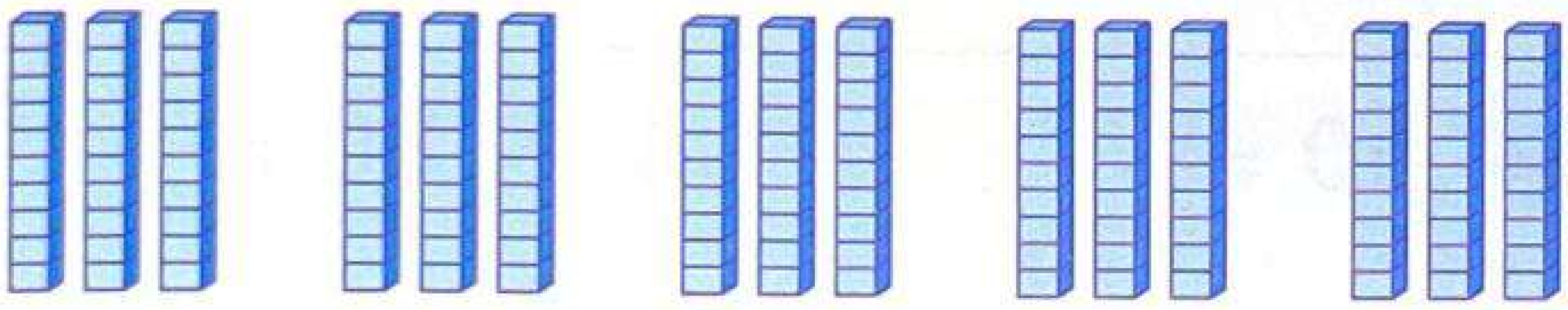
$5 \times 30$

$= (5 \times 3) \times 10$

$= 15 \times 10 = 150$

### Third strategy

Draw place value blocks which represent 5 groups of 30.



5 × 3 tens = 15 tens

$5 \times 30 = 150$

*Math tip*

*You can count by 10 s on drawings to find the product.*



## Check

Find the following products using any strategies.

| 6 × 20 | 4 × 50 | 3 × 80 |
|---|---|---|
| | | |

- Make sure that your child recognize the strategies and ask him/her to use them to find the product of 3 × 70.

## Practice

**Match.**

| 4 × 20 | 3 × 60 | 5 × 70 | 8 × 30 |
|---|---|---|---|
| 240 | 350 | 80 | 180 |

**Find the following products.**

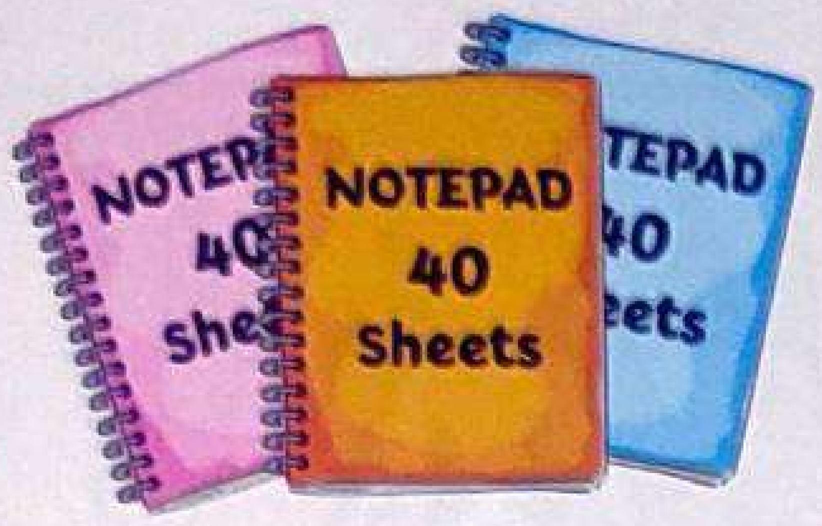
| | | |
|---|---|---|
| 3 × 40 = ____ | 2 × 50 = ____ | 4 × 60 = ____ |
| 7 × 40 = ____ | 5 × 50 = ____ | 4 × 80 = ____ |
| 3 × 700 = ____ | 9 × 300 = ____ | 5 × 100 = ____ |
| 3 × 200 = ____ | 4 × 5,000 = ____ | 6 × 3,000 = ____ |
| 2 × 9,000 = ____ | 5 × 8,000 = ____ | 8 × 7,000 = ____ |

**Notes for parents**

- Ask your child to find the product of 3 × 30 using strategies.

## Answer the following problems.

- How many sheets are in **3** notepads ?




______

- How many hats are in **4** bags ?




______

- How many stickers are in **5** packs ?




______

- Amir bought 3 books to read.
  Each book costs **40** pounds.
  **How much did Amir pay ?**



______

- A fruit seller sells every day **60** kilograms of fruit.
  **How many kilograms does the fruit seller sell in 4 days ?**




______

## Challenge

- Mr. Marwan's class makes puppets for a finger play. There are 6 groups of 5 students in the class. Students will make a puppet for each finger. **Answer.**
  - How many students in Mr. Marwan's class ? ______
  - How many puppets will each group make ? ______
  - How many puppets for all the class ? ______

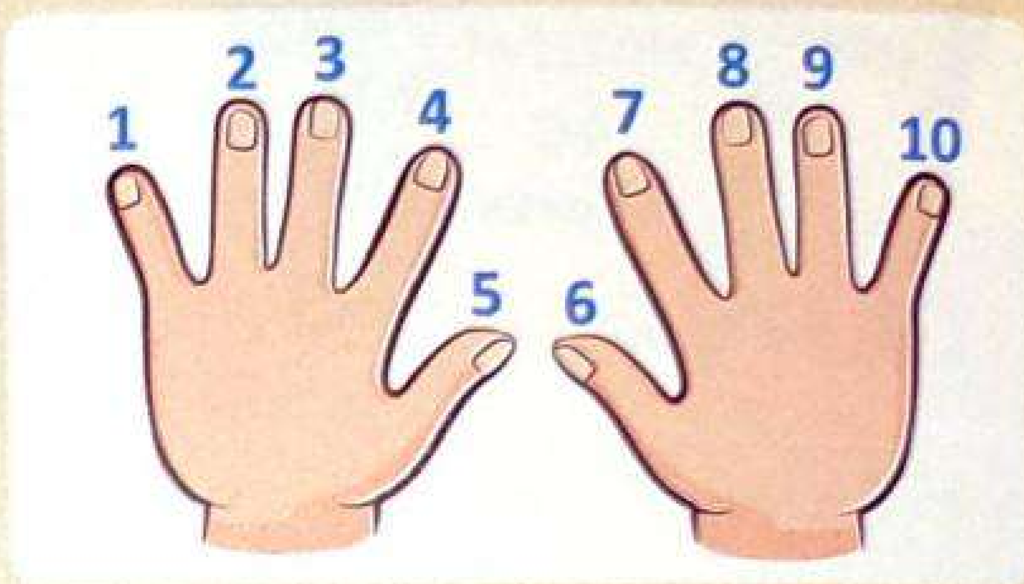
Lesson 52

# Multiplying by 9 using different strategies

## Learn

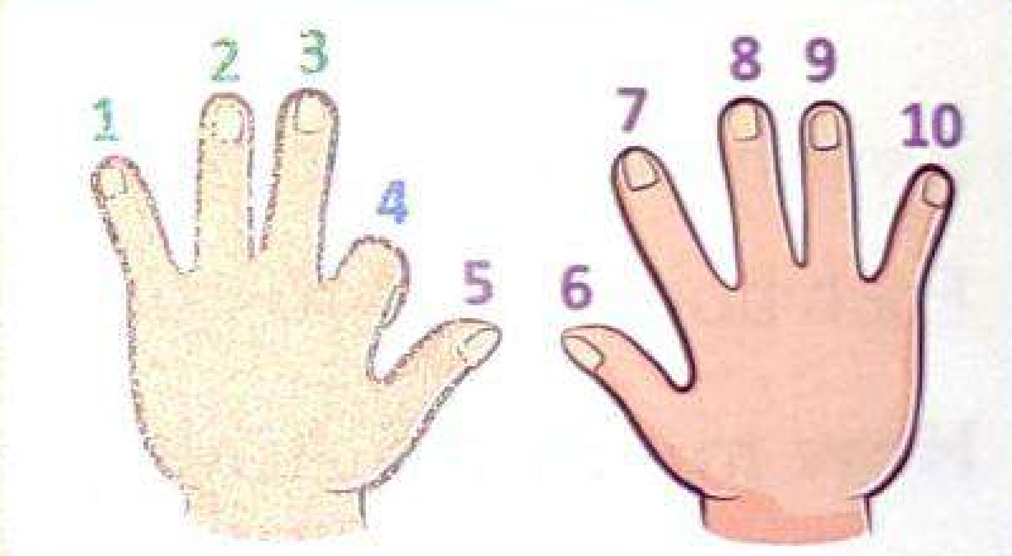
### First : Finger trick strategy

- Put both hands on your desk, palms down. Mentally number your fingers from left to right.



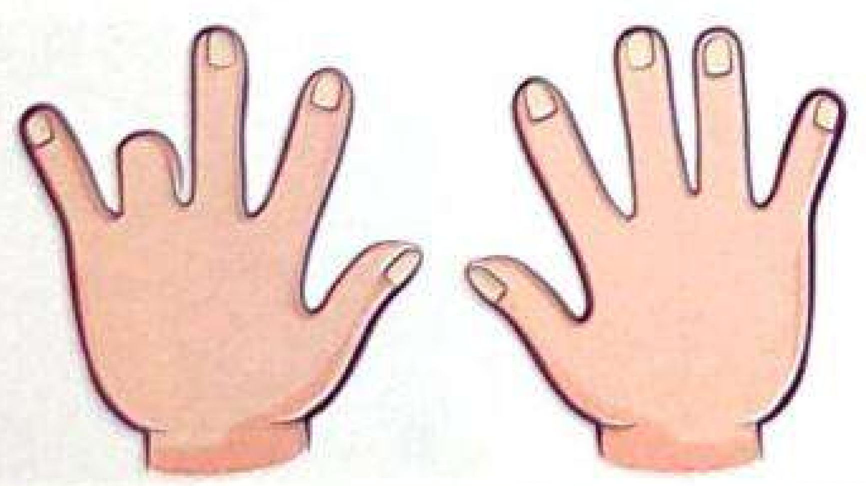

- To find **4 × 9**, bend down finger number **4**. Fingers to the left of the bent finger show the number of tens in the product.
- Fingers to the right of the bent finger show the number of ones in the product.

**4 × 9 = 36**

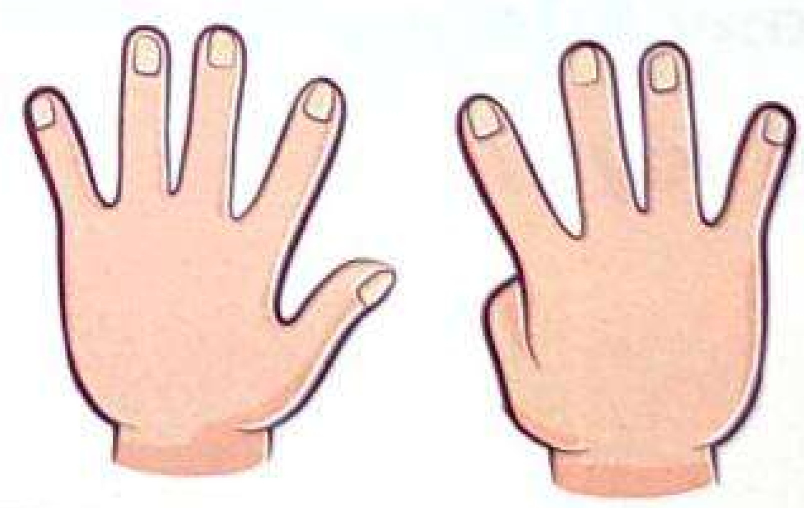



## Check

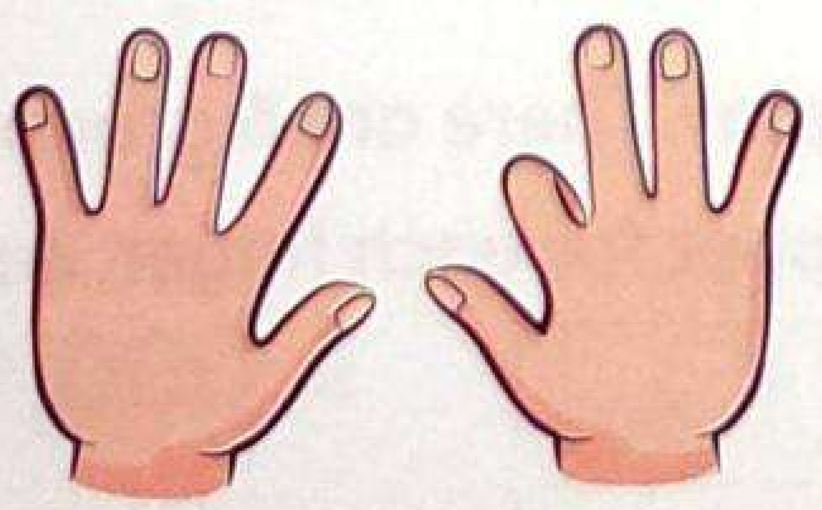
Solve the following by using figures.



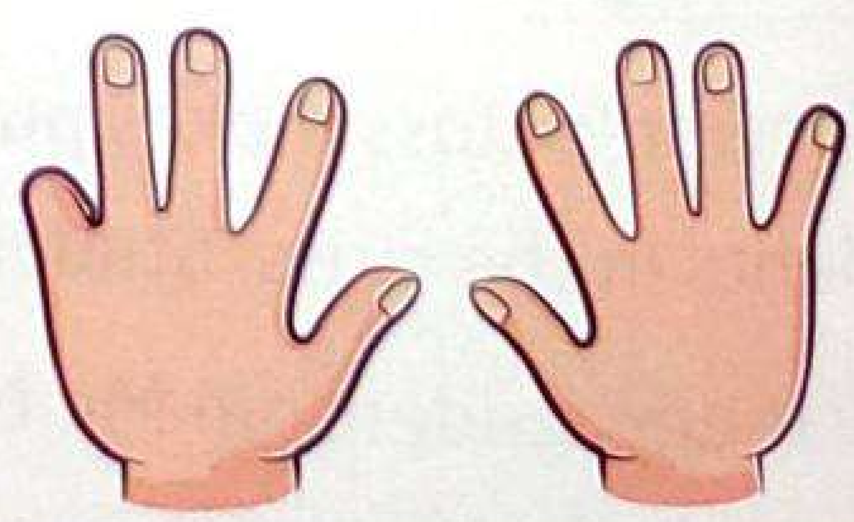
2 × 9 = ______



6 × 9 = ______



7 × 9 = ______



1 × 9 = ______

**Notes for parents**

- Ask your child to find the product of 5 × 9 using his/her fingers.

## Learn — Second : List of equations strategy

- **What's the pattern ?**

Bassem and Sarah must find $8 \times 9$. They look for patterns in able to help.

**9s facts**

$1 \times 9 = 9$

$2 \times 9 = 18$

$3 \times 9 = 27$

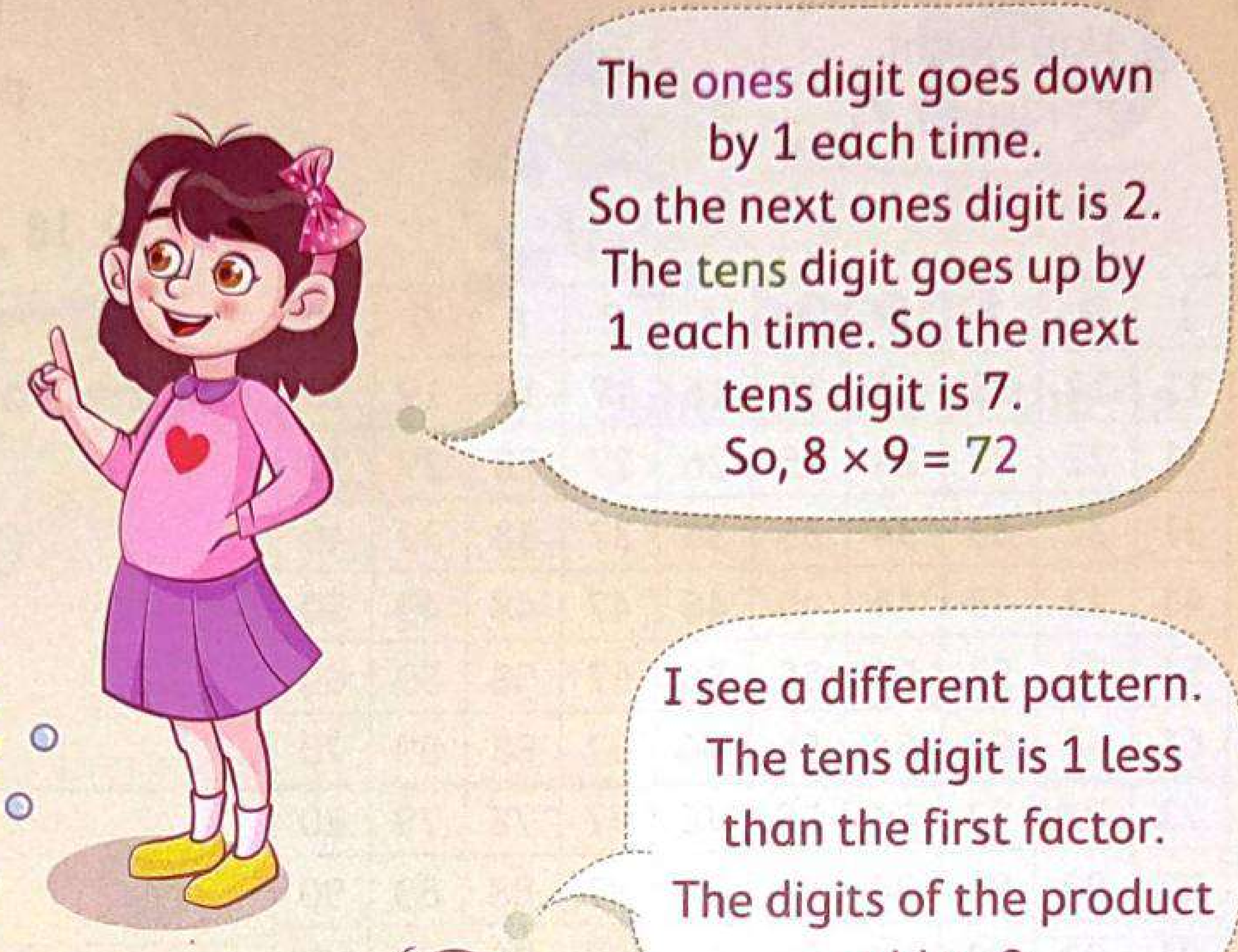
$4 \times 9 = 36$

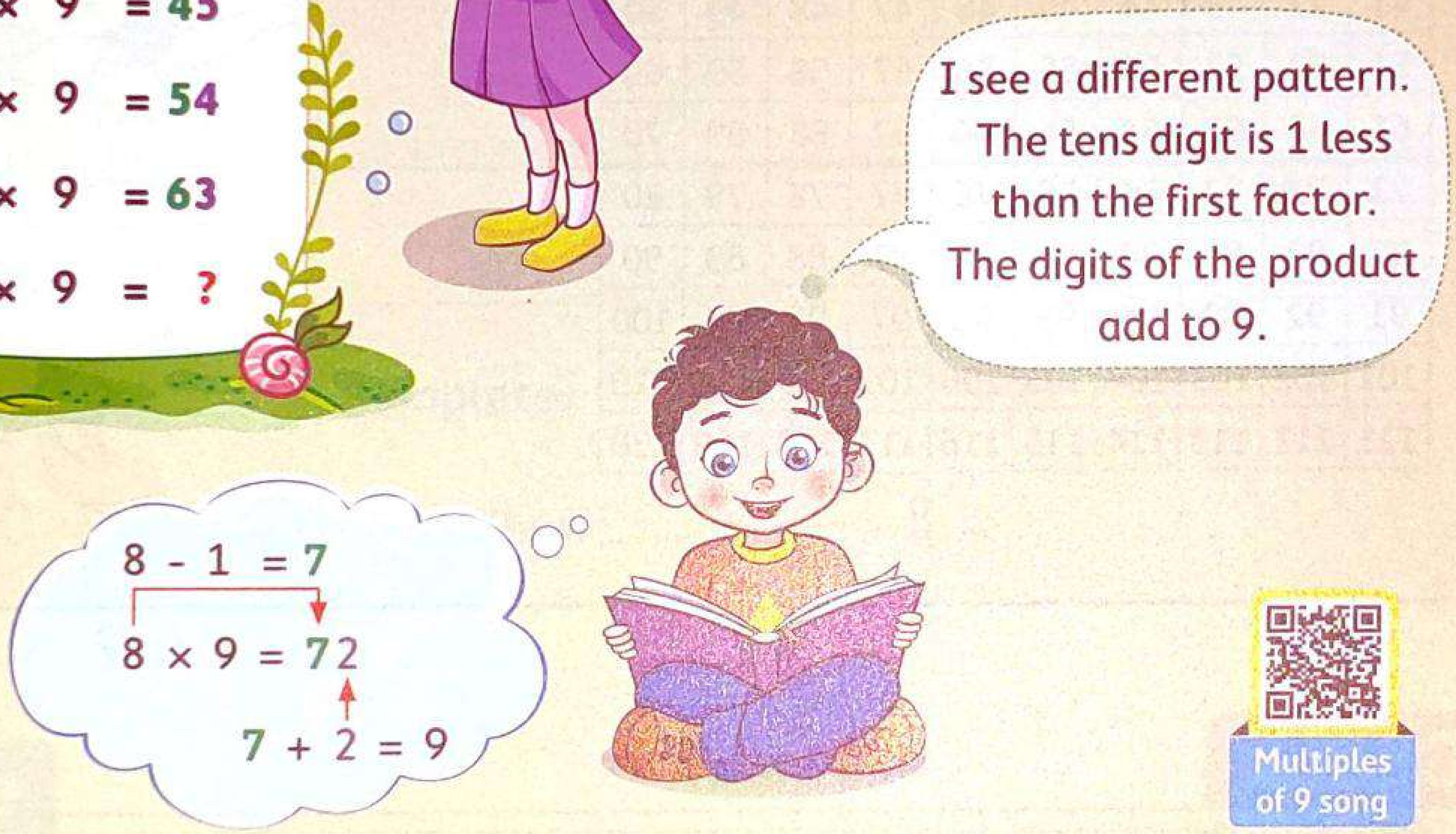
$5 \times 9 = 45$

$6 \times 9 = 54$

$7 \times 9 = 63$

$8 \times 9 = ?$




Multiples of 9 song

- **Notice that :**

The sum of the tens and ones digits in each product is 9.

$9 \times 2 = 18$ , $1 + 8 = 9$ $9 \times 5 = 45$ , $4 + 5 = 9$ $9 \times 7 = 63$ , $6 + 3 = 9$

## Check

**Solve the following by using pattern.**

$3 \times 9$ = ______ $9 \times 4$ = ______

$9 \times 6$ = ______ $5 \times 9$ = ______

• Ask your child to find the product $7 \times 9$ using pattern.

## Learn Third : 120-chart strategy




| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |




## Check

**Complete.**

| | |
|---|---|
| 45 , 54 , ______ , 72. | 18 , 27 , ______ , ______ . |
| 63 , 72 , ______ , ______ . | 9 , ______ , 27 , ______ . |
| 36 , 45 , ______ , ______ . | 27 , ______ , ______ , 54. |

**Notes for parents**

- Ask your child to skip-counting forward by 9's.

## Learn — Fourth : Ten facts strategy



Find : $4 \times 9 = ?$



**First**

You can think of the problem as

$4 \times 10 = 40$

**Second**

Subtract one of the 4s

$$\begin{array}{r} 40 \\ -\ \ 4 \\ \hline 36 \end{array}$$

## Check

To find : $8 \times 9 = ?$ Complete.

$8 \times 10 =$ ______ Then ______ $- 8 =$ ______.

Then $8 \times 9 =$ ______.

## Practice

Play game

Find the product using different strategies.

| | |
|---|---|
| $3 \times 9 =$ ______ | $2 \times 9 =$ ______ |
| $6 \times 9 =$ ______ | $4 \times 9 =$ ______ |
| $9 \times 5 =$ ______ | $9 \times 8 =$ ______ |
| $1 \times 9 =$ ______ | $0 \times 9 =$ ______ |

• Ask your child to find the product $7 \times 9$ using ten fact strategy.

Join.

| | |
|---|---|
| 7 × 9 | 36 |
| 72 | 9 × 5 |
| 4 × 9 | 63 |
| 45 | 9 × 8 |



Complete.

| | |
|---|---|
| ____ × 9 = 36 | 9 × ____ = 81 |
| ____ × 9 = 18 | 9 × ____ = 27 |
| ____ × 9 = 9 | 9 × ____ = 54 |
| ____ × 9 = 72 | 9 × ____ = 63 |

**Notes for parents**

- Help your child to find the product of 7 × 9 by different strategies.

Place a smiley face

Lesson 53

# Addition and multiplication facts

## Learn

- Here are some addition and multiplication facts will help you to solve addition and multiplication problems.

**Adding to zero**

The sum of zero and any number is that number.

**Example :** $0 + 3 = 3$

**Multiplying by zero**

The product of zero and any number is zero.

**Example :** $0 \times 3 = 0$

**Adding to 1**

The sum of 1 and any number is the number which just comes after.

**Example :** $1 + 3 = 4$

**Multiplying by 1**

The product of 1 and any number is that number.

**Example :** $1 \times 3 = 3$

**Adding in any order**

Addends can be added in any order and the sum does not change.

**Example :** $3 + 2 = 5$

$2 + 3 = 5$

**Multiplying in any order**

Factors can be multiplied in any order and the product does not change.

**Example :** $3 \times 2 = 6$

$2 \times 3 = 6$

**Doubling numbers**

Adding the same number twice is doubling it (multiplying by 2).

**Example :** $3 + 3 = 2 \times 3$

$6 = 6$

**Multiplying big numbers**

Break apart big numbers into two smaller numbers.

**Example :** $6 \times 7$

$= (6 \times 5) + (6 \times 2)$

$= 30 + 12$

$= 42$



• Help your child to recognize the facts of addition and multiplication and ask him/her to explain how they similar or different.

## Check

Match the equal results.

| 4 + 0 | 3 × 4 | 0 + 0 | 3 + 4 | 4 + 4 |
|---|---|---|---|---|
| 4 × 3 | 4 + 3 | 4 × 1 | 2 × 4 | 2 × 0 |

## Practice

Use addition or multiplication facts to find results.

| | | |
|---|---|---|
| 5 × 1 = ____ | 6 + 0 = ____ | 8 × 9 = ____ |
| 2 × 2 = ____ | 3 + 7 = ____ | 9 × 0 = ____ |
| 10 + 5 = ____ | 6 × 4 = ____ | 5 + 6 = ____ |
| 6 + 6 = ____ | 2 × 10 = ____ | 0 × 0 = ____ |
| 5 + 10 = ____ | 1 × 8 = ____ | 4 × 10 = ____ |
| 0 + 10 = ____ | 4 × 5 = ____ | 9 + 2 = ____ |
| 1 × 1 = ____ | 7 + 7 = ____ | 1 + 6 = ____ |
| 9 × 9 = ____ | 10 × 0 = ____ | 5 + 5 = ____ |
| 8 + 1 = ____ | 1 × 2 = ____ | 3 × 3 = ____ |

**Notes for parents**

• Ask your child to explain the fact or strategy he/she used to solve the problems.

Check the following problems if add or multiply. Find the results.

- Amgad bought 3 toys. Each toy costs 5 pounds.

**How much money did Amgad pay ?**

**Solve :** ______________________

______________________

| Check | |
|---|---|
| Add | Multiply |

- Sarah read 4 books in a month. In the next month she read 5 books.

**How many books did she read in the two months ?**

**Solve :** ______________________

______________________

| Check | |
|---|---|
| Add | Multiply |

- Youssef has 5 sets of coloring pencils. Each set has 6 pencils.

**How many pencils does Youssef have in all ?**

**Solve :** ______________________

| Check | |
|---|---|
| Add | Multiply |

Complete the missing numbers.

3 × ____ = 7 × 3

4 × ____ = 0

6 + ____ = 7

____ × 5 = 5

7 × 8 = ( 7 × ____ )+( 7 × 7 )



## Challenge

- **Put × or + .**

| | | |
|---|---|---|
| 8 ◯ 0 = 8 | 5 ◯ 1 = 5 | 8 ◯ 2 = 10 |
| 1 ◯ 4 = 5 | 0 ◯ 10 = 0 | 2 ◯ 4 = 8 |

• Practice your child to know the difference between the problems of addition or multiplication telling him/her some problems and ask him/her to solve it.

Place a smiley face

Lesson 54

# Review place value

## Remember

- The value of each digit in any number depends on its place in this number.

**Example :**
Notice the value and place value of each digit in the number 4 6 5 , 2 7 3

4 6 5 , 2 7 3

| 4 is in the hundred thousands place | 6 is in the ten thousands place | 5 is in the thousands place | 2 is in the hundreds place | 7 is in the tens place | 3 is in the ones place |
|---|---|---|---|---|---|
| Its value is 400,000 | Its value is 60,000 | Its value is 5,000 | Its value is 200 | Its value is 70 | Its value is 3 |

- Different forms of writing a number

Standard form : 465,273

Expanded form : 400,000 + 60,000 + 5,000 + 200 + 70 + 3

Word form : Four hundred sixty-five thousands, two hundred seventy-three.

- Value and place value help you comparing or ordering numbers.

## Practice

**Complete the following.**

30,000 = ______ thousands

4,000 = ______ thousands

______ = 200 thousands

200 hundreds = ______ thousands.

______ tens = 600

1 hundred thousands = ______ ten thousands

**Notes for parents**

- Help your child to review on the value and the place value for 6-digit number.

## Complete the following.

- 469,538 = ________ + ________ + ________ + ________ + ________ + ________
- Three hundred twenty-one thousands, nine hundred thirty-one in standard form is ________________
- The value of the digit 6 in the number 26,033 is ________ and its place value is ________
- 700,000 + 500 + 9,000 + 8 + 40 = ________
- 4,327 = ________ thousands + ________ hundreds + ________ tens + ________ ones

## Put > , < or =.



- 7 thousands ◯ 700 thousands
- 14,120 ◯ 14,210
- 582,006 ◯ 581,006
- 79,284 ◯ 79,282
- 120,000 ◯ 1,200 hundreds
- 401,603 ◯ Forty-one thousands, six hundred three
- 9,999 ◯ 10 thousands
- 371,502 ◯ 39,813
- 35 + 500 + 3,000 ◯ 535 + 3,000
- 80,000 + 7,000 + 123 ◯ 7,000 + 800,000 + 123

• Ask your child how many times greater is the tens place than the ones place for the same digit ?
He/she should answer : 10 times.

## Arrange the following numbers in an ascending order.

| 11,012 | 7,234 | 12,011 | 7,235 | 109,001 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

| 55,318 | 505,720 | 5,099 | 550,941 | 55,418 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

## Arrange the following numbers in a descending order.

| 3,109 | 499 | 30,199 | 4,099 | 409,009 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

| 248,672 | 15,368 | 9,725 | 248,671 | 15,378 |
|---|---|---|---|---|

The order is : ________ , ________ , ________ , ________ , ________

## Choose the correct answer.

- The value of the digit 3 in the number 43,782 is ________
  ◯ 30,000  ◯ 300,000  ◯ 3,000
- 6,000 + 100,000 + 5 + 20 + 700 = ________
  ◯ 16,725  ◯ 106,725  ◯ 61,527
- The place value of the digit 8 in the number 582,014 is ________
  ◯ thousands  ◯ ten thousands  ◯ hundred thousands
- Five hundred thirty-one thousands, seventy-four in standard form is ________
  ◯ 531,740  ◯ 53,174  ◯ 531,074
- 74, 215 > ________
  ◯ 74,225  ◯ 74,316  ◯ 74,005
- 352,948 < ________
  ◯ 350,949  ◯ 352,950  ◯ 352,850

**Notes for parents**

- Ask your child to tell you the value and the place value of each digit in the number : 243,019.

Find the mistake in each of the following. Correct the mistake.

Answers may vary

The value of the digit 7 in the number 74,123 is 700,000

______________________

______________________

The expanded form of the number 835,469 is 8 + 30 + 500 + 4,000 + 60,000 + 900,000

______________________

______________________

The word form of the number 58,072 is fifty-eight thousands, seven hundred two.

______________________

______________________

The place value of the digit 5 in the number 561,248 is ten thousands.

______________________

______________________

300 thousands = 3,000 tens

______________________

______________________

91,000 + 234 > 91,235

______________________

______________________

462,375 < 462,357

______________________

______________________

800 hundreds = 8 thousands

______________________

______________________

The numbers :

5,101 - 10,050 - 510,001 - 501,001 - 50,011 are arranged in an ascending order.

______________________

______________________

Lessons

# 55 & 56

# Addition strategies

## Learn

**Add 324 + 167**

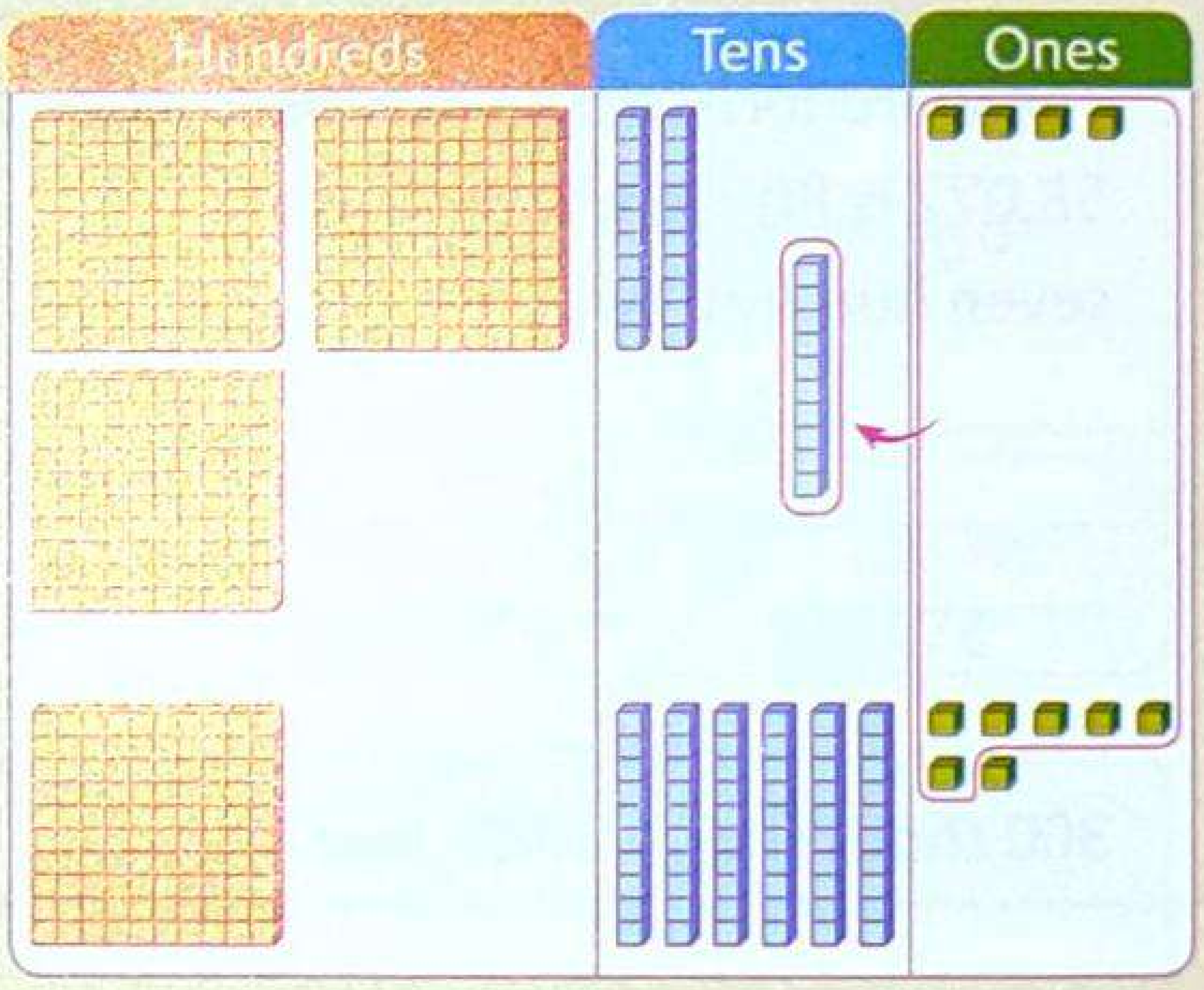
**Here are some strategies that help you to add.**

### First strategy

Adding using place value blocks.

- Show each number with place value blocks.
- Combine the ones
  4 ones + 7 ones = 11 ones = 11
- Combine the tens
  2 tens + 6 tens = 8 tens = 80
- Combine the hundreds
  3 hundreds + 1 hundred = 4 hundreds = 400
- Add each value to find the sum.

**400 + 80 + 11 = 491**







*10 ones = 1 ten*
*10 tens = 1 hundred*
*10 hundreds = 1 thousand*

### Second strategy

Decomposing numbers.

- Decomposing each number writing the values of each digit.
- Add the values of ones, tens and hundreds.
- Add the total values

324 → 300 + 20 + 4

+167 → + 100 + 60 + 7

400 + 80 + 11

**400 + 80 + 11 = 491**

**Notes for parents**

- Help your child to recognize the two strategies and ask him/her to find the sum of 253 and 419 using strategies.

**Third strategy**

Number line hops.

- Decompose the smeller number which is 167.
- The first hop in the number line is adding hundreds.
- The second hop in the number line is adding tens.
- The third hop in the number line is adding ones.

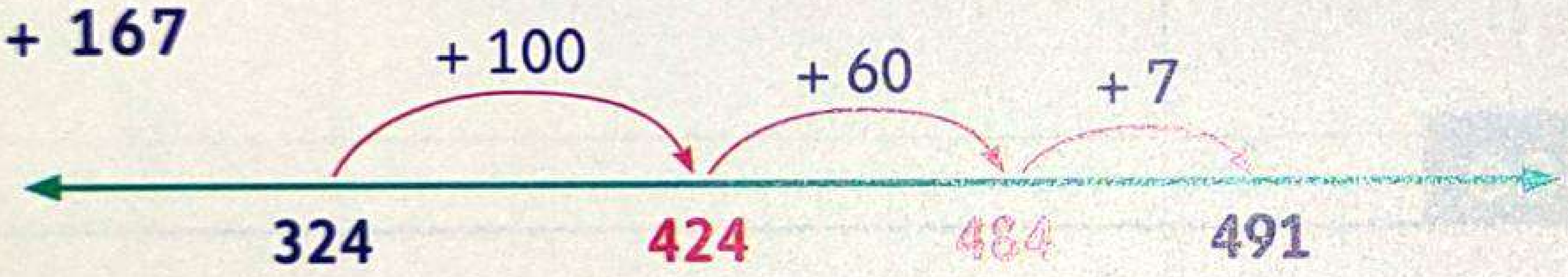
167 → 100 + 60 + 7

324 + 100 = 424

424 + 60 = 484

484 + 7 = 491

**324 + 167**




**Fourth strategy**

Adding with regrouping

- Start by adding the ones moving to the left.

This shows that we regrouped 10 ones as 1 ten

```
    1
  3 2 4
+ 1 6 7
-------
  4 9 1
```

**Estimate to check** 3(2)4 rounds down to 300

, 1(6)7 rounds up to 200

The estimation is : 300 + 200 = 500

since 491 is close to 500, the answer is reasonable.

*You can use these strategies to add numbers which has more or less than 3- digits.*

- Help your child to understand all strategies and ask him/her to find the sum of 508 and 192 and estimate to check the answer.

## Check

Use one of the previous strategies to show how to find the sum of 416 and 258. Estimate to check if the sum is close to 700 or not.

## Practice

Solve the following problems using two different strategies.

| Problem | First strategy | Second strategy |
|---|---|---|
| 127 + 426 | | |
| 355 + 25 | | |
| 429 + 152 | | |

**Notes for parents**

- Ask your child to use different strategies to find the answers in different ways.

Solve the addition problems below using a strategy that is efficient for you. Estimate to check the answer.

| Problem | Work area | Estimation |
|---|---|---|
| 356 + 282 | | |
| 171 + 162 | | |
| 37 + 148 | | |
| 343 + 788 | | |
| 1,435 + 2,394 | | |
| 3,668 + 1,027 | | |

• Help your child to use different strategies to solve the problems.

## Solve the following problems.

(142 + 297) + 116

= ( ______ ) + 116

= ______



**Hint**

*Add the first and the second numbers together, then add the sum to the third number.*

316 + 12 + 149

______

______

98 + 312 + 175

______

______



(137 + 201) + (119 + 235)

= ( ______ ) + ( ______ )

= ______

**Hint**

*Add the first and the second numbers, Add the third and the fourth numbers, then add the two sums together.*

411 + 98 + 312 + 175

______

______



156 + 252 + 309 + 213

______

______



**Notes for parents**

- Ask your child to choose two numbers from above and tell a story problem using those numbers and solve it.

The table below shows the saved money in one year by 4 children. Use this information to answer the questions.

- Find the total amount which saved by Bassem and Mina.

| Saved money | |
|---|---|
| Name | Amount in pounds |
| Bassem | 325 |
| Sylvia | 567 |
| Mina | 328 |
| Amal | 472 |

- Find the total amount which saved by Sylvia and Amal.



- Find the total amount which saved by Bassem, Sylvia and Mina.

## Challenge

- Compare between the saved money for (Bassem and Sylvia) and the saved money for (Mina and Amal).

• Ask your child to read the data on the table and estimate the total amount of Sylvia and Mina and check if it close to the exact amount or not.

The following table shows the approximated distance between Egypt and some countries in km. Use the information to answer the questions below.

| Approximated distance from Egypt to | |
|---|---|
| Country | Distance in km. |
| Saudi Arabia | 1,470 |
| Tunisia | 2,480 |
| Ghana | 3,955 |
| Italy | 2,360 |

- Find the sum of distances between Saudi Arabia to Egypt and Tunisia to Egypt.

- Find the total distance from Egypt to Ghana and from Egypt to Italy.

- Find the sum of distances from Egypt to Tunisia and from Egypt to Ghana.



## Challenge

- Find the total four distances from Egypt to the other 4 countries.

**Notes for parents**

- Ask your child to estimate the sum of distances from Egypt to Tunisia and from Egypt to Ghana and compare between it and the exact sum of distances.

Place a smiley face

Lesson

# 57

# Subtract using strategies

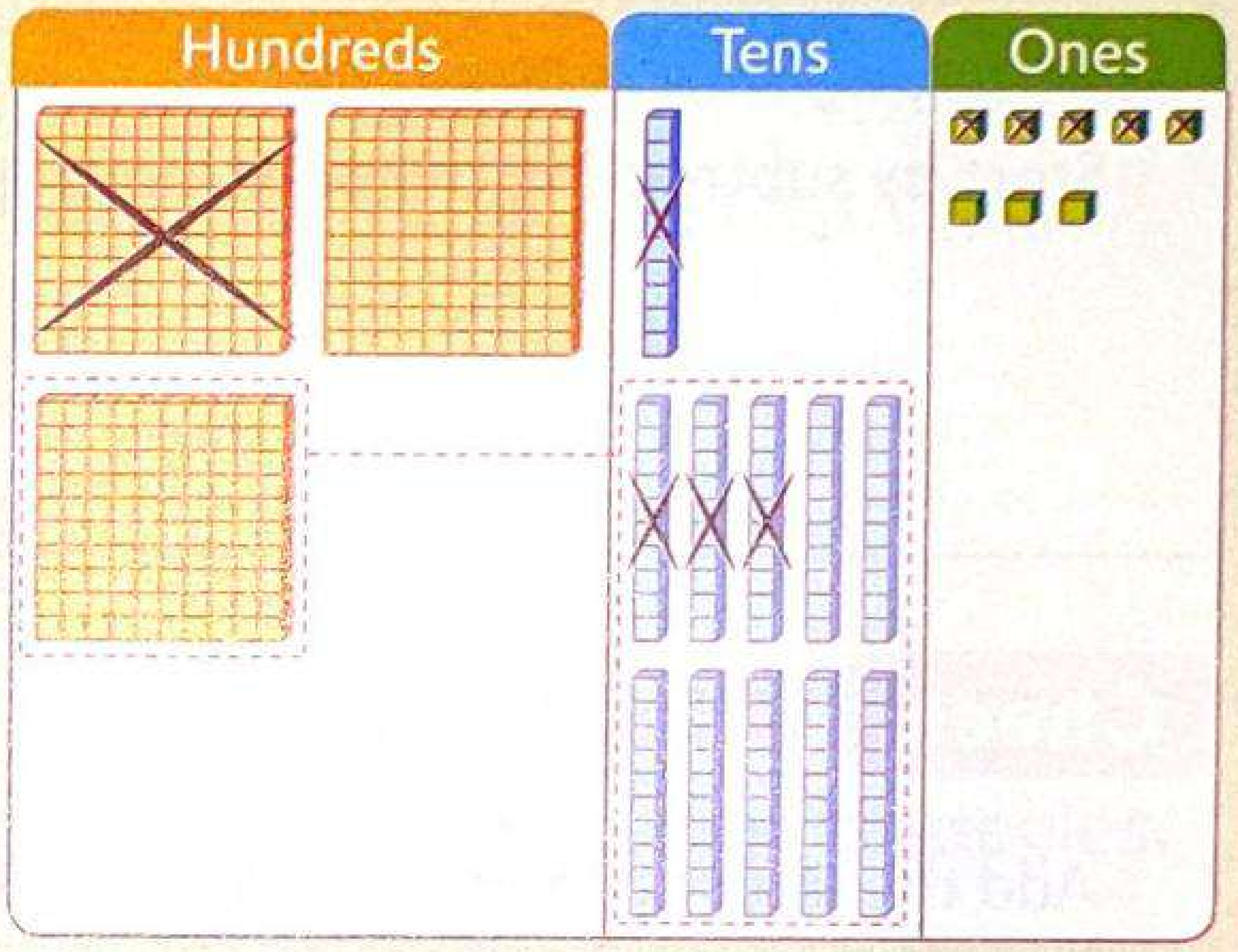
## Learn

### Subtract 318 − 145

**Here are some strategies that help you to subtract.**

**First strategy**

Place value blocks.




- Show the greater number with place value blocks.
- Subtract the ones
  8 ones − 5 ones = 3 ones = 3
- Subtract the tens
  Since there are not enough tens to subtract, decompose 1 hundred as 10 tens.
  11 tens − 4 tens = 7 tens = 70
- Subtract the hundreds.
  2 hundreds − 1 hundred = 1 hundred = 100
- Add the values to find the difference

**100 + 70 + 3 = 173**

**Second strategy**

Number line hops.

- Decompose the smaller number
- The first hop in the number line is subtracting hundreds
- The second hop in the number line is subtracting tens.
- The third hop in the number line is subtracting ones.

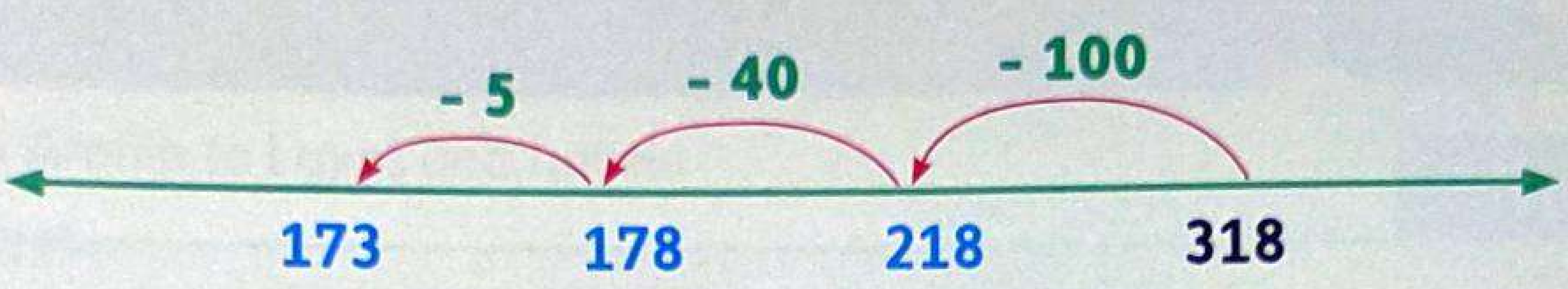
145 = 100 + 40 + 5

318 − 100 = 218

218 − 40 = 178

178 − 5 = 173

• Help your child to recognize different subtraction strategies to solve problems.




**Third strategy**

Subtracting with regrouping

- Start by subtracting the ones moving to the left.

$$\begin{array}{r} \overset{2}{\cancel{3}}\overset{11}{\cancel{1}}8 \\ -\ 145 \\ \hline 173 \end{array}$$

**Check** **Using fact family**

- Add the difference to the subtrahend
  If you get minuend, then your check
  and your answer is correct

**Since,** 318 – 145 = 173

minuend | subtrahend | difference

**Then :** 173 + 145 = 318

**So, 173** is the correct answer.

**Remember**

**fact family**

318 – 145 = 173

318 – 173 = 145

173 + 145 = 318

145 + 173 = 318

*These strategies can be used in subtraction of 3-digit number and more or less digits.*



**Notes for parents**

- Ask your child to find the difference of 535 – 280 using different strategies.

## Check

Use any strategy to find the difference of 563 – 280 check your answer using fact families.

## Practice

Solve the following subtraction problems using two different strategies.

| Problem | First strategy | Second strategy |
|---|---|---|
| 651 – 123 | | |
| 735 – 206 | | |
| 127 – 35 | | |

• Ask your child to point to any two numbers in this page and find the difference between them.

Solve each subtraction problem using any strategy you choose.
Use fact families to check your answer.

| Problem | Work area | Check your answer |
|---|---|---|
| 684 – 232 | | |
| 790 – 50 | | |
| 855 – 105 | | |
| 3,489 – 1,263 | | |
| 8,600 – 4,300 | | |
| 1,330 – 1,270 | | |

**Notes for parents**

• Make sure that your child check his/her answer in right way.

Place a smiley face

Lesson

58

# Addition and subtraction word problems

## Learn

Youssef has 237 blocks, Maged has 148 blocks.

**How many blocks do they have all together ?**

• Look for
• Decide
• Solve

Look for keyword to solve.

All together

Decide if you add or subtract.

(Add) Subtract

Solve the problem.

The number of all blocks = 237 + 148 = 385 blocks.

**Hint :**

Some keywords of addition :

- total
- all together
- sum
- in all
- and
- add
- join

The school library had 3,640 books for rent.

During one week 1,280 of them were rented.

**How many books were left ?**

• Look for
• Decide
• Solve

Look for keyword to solve.

Left

Decide if you add or subtract.

Add (Subtract)

Solve the problem.

The left books = 3,640 − 1,280 = 2,360 books.

**Hint :**

Some keywords of subtraction :

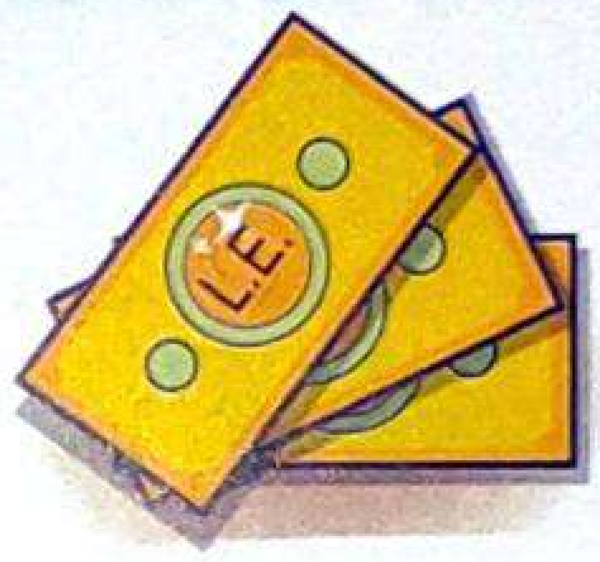
- left
- how many more?
- how many less?
- take away
- remain
- difference
- subtract

• Ask your child to solve word problems using other strategies he/she has learned such as place value blocks, number line hops or adding/subtracting with regrouping.

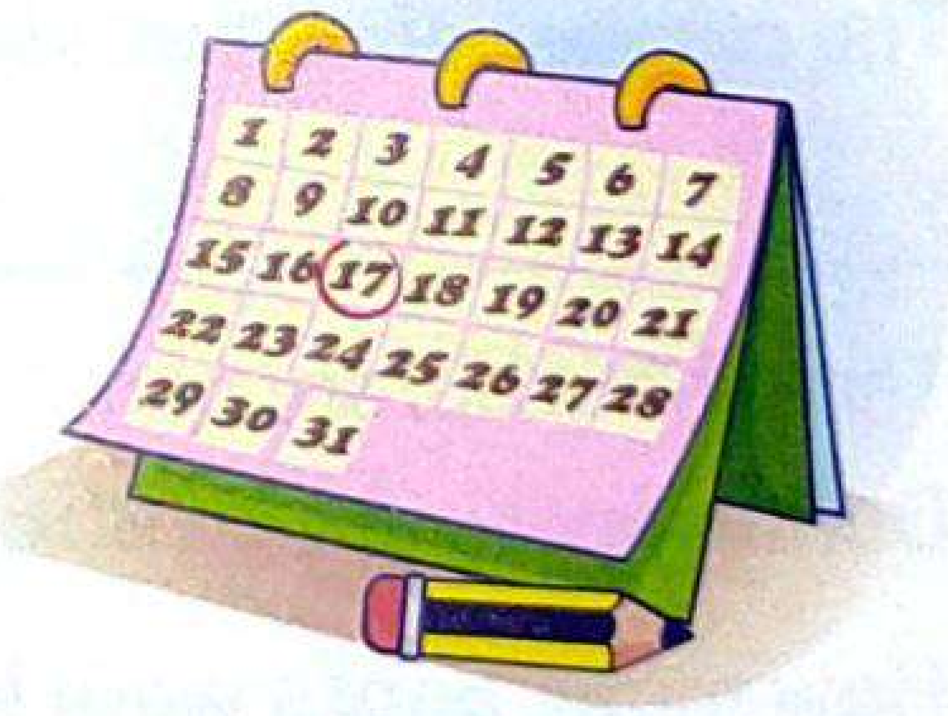
## Practice

Read each story problem and decide on a strategy to solve it show your work of each problem. Some problems might have more than one step to be solved. Read carefully.

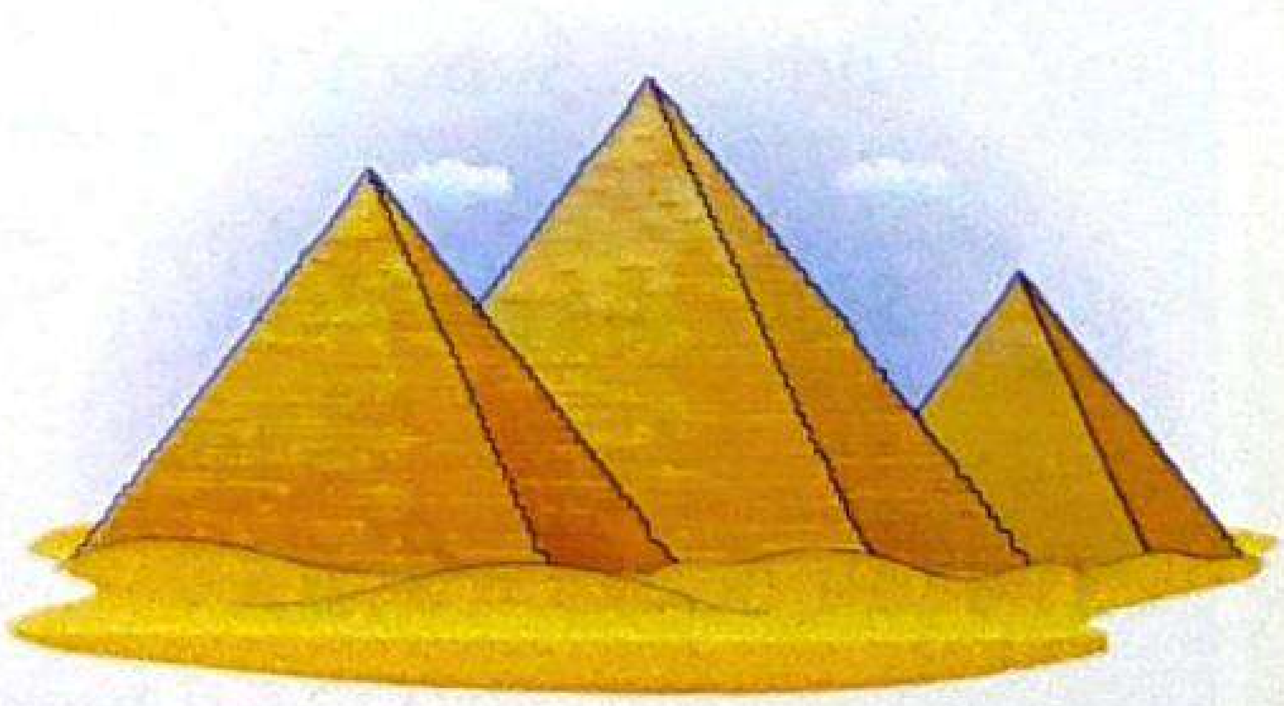
- Amr saved 365 pounds in one year. The next year he saved 475 pounds. **What is the total amount he saved ?**




- There are 365 days in one year. If 147 days have passed since the beginning of the year. **How many days are left in the year ?**



- The school arranged a trip to pyramids. 1,355 students from primary stage and 1,420 from preparatory and secondary stages are going. **How many students are going in all stages ?**



**Notes for parents**

- Ask your child to tell you an addition story problem and ask him/her to solve it.

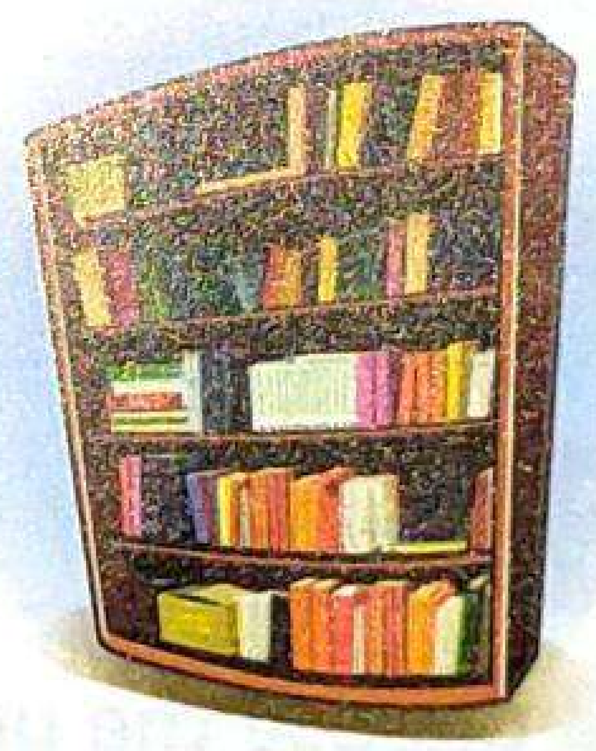
- Bassem's book has 370 pages. He has already read 139 pages.
  **How many pages does Bassem have left to read ?**



- Three boxes filled with marbles were just delivered to the factory. If each box is filled with 435 marbles.
  **How many marbles were delivered in all ?**




- The library can hold 3,645 books. If 1,355 books are out on loan and 250 books are missing.
  **How many books are there in the library right now ?**



- Sami had 6,000 L.E. to spend. He bought a new mobile for 3250 L.E. and a speaker for 675 L.E.
  **How much money does have left with him ?**



• Ask your child to tell you a mixed story problem "need more steps to be solved" and ask him/her to solve it.

Place a smiley face

Lessons **59 & 60**

# Liquid volume (Measuring capacity)

## Learn Capacity



- Capacity is the amount of liquid a container can hold.
- Units of capacity are :

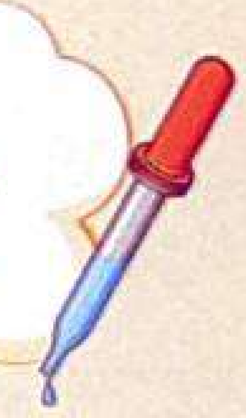
  a **liter** (L) used to measure large amounts and

  a **milliliter** (mL) used to measure small amounts.



**For example :**



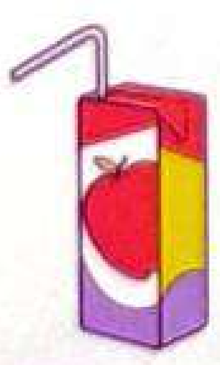

- There are **1,000 milliliters** in **1 liter.**

**1 liter (L) = 1,000 milliliters (mL)**

**So,** 2 L = 2,000 mL , 3 L = 3,000 mL , ...

## Check

Choose the unit you would use to measure the capacity of each.



○ L ○ mL



○ L ○ mL




○ L ○ mL



○ L ○ mL



○ L ○ mL



○ L ○ mL

**Notes for parents**

- Let your child think about some containers at home, then determine 2 containers might hold more than 1 liter.

## Practice

Choose the better estimation for each.

| | | |
|---|---|---|
|  |  |  |
| ○ 1 mL ○ 1 L | ○ 300 mL ○ 300 L | ○ 10 mL ○ 10 L |
|  |  |  |
| ○ 40 mL ○ 40 L | ○ 2 mL ○ 2 L | ○ 500 mL ○ 500 L |

Choose the correct answer.

- 3 L = ________ mL . ( 30 or 300 or 3,000 )
- 14 liters = ________ milliliters . ( 140 or 14,000 or 1,400 )
- 10 L = ________ mL . ( 1,000 or 100 or 10,000 )
- A perfume bottle is measured by ________ ( mL or L )
- Water in a basin is measured by ________ ( mL or L )

• Ask your child to bring 2 containers might hold less than 1 liter at home.

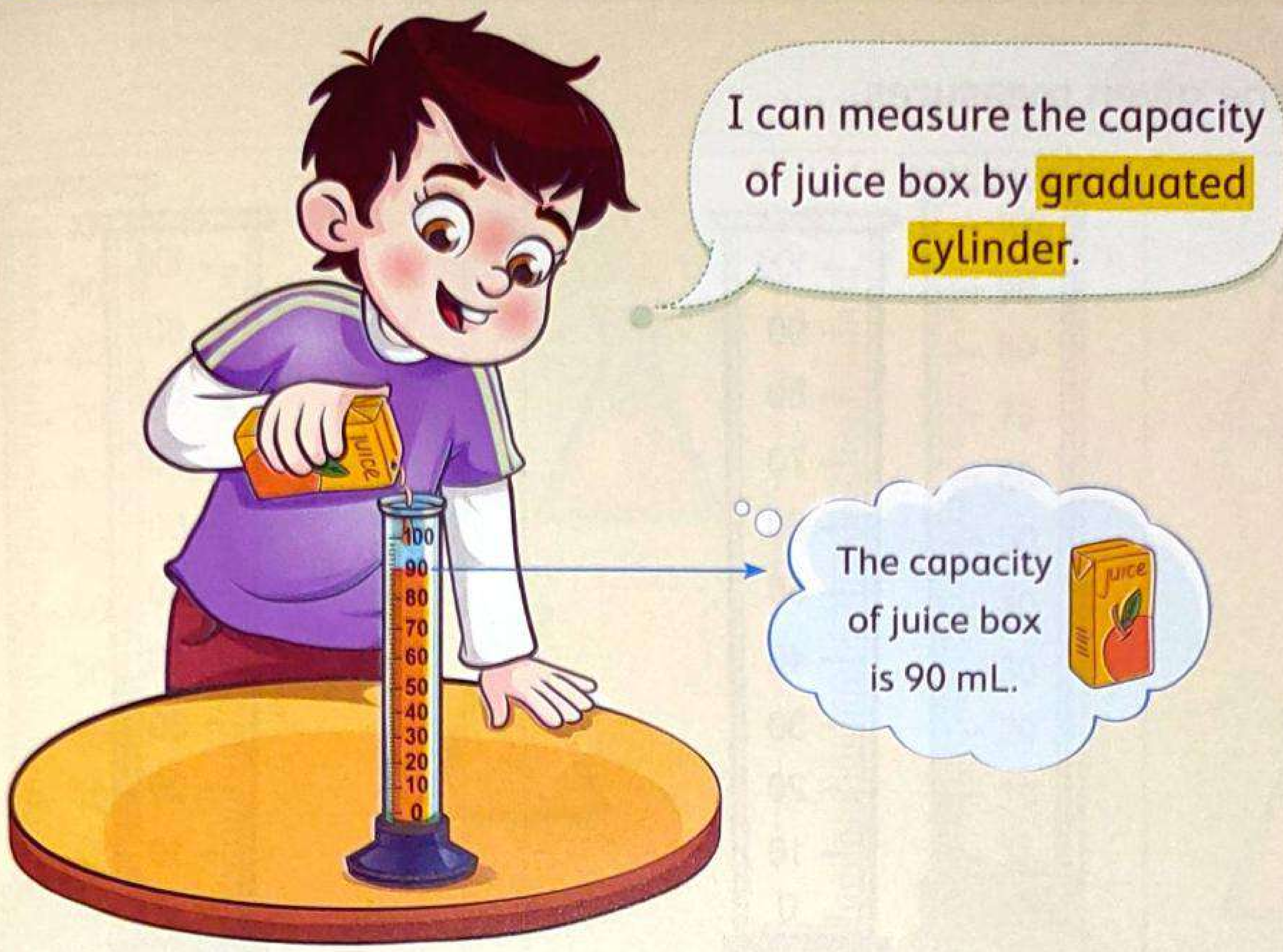
**Complete the table by writing the names of the containers around you , then write the suitable unit to measure the capacity of each container.**

| Container | Suitable measurement unit |
| --- | --- |
| Example : A tank of water  | liter ( L ) |
| | |
| | |
| | |

**Notes for parents**

• Help your child in writing the names of the chosen containers.

## Learn Liquid volume (Measuring capacity)

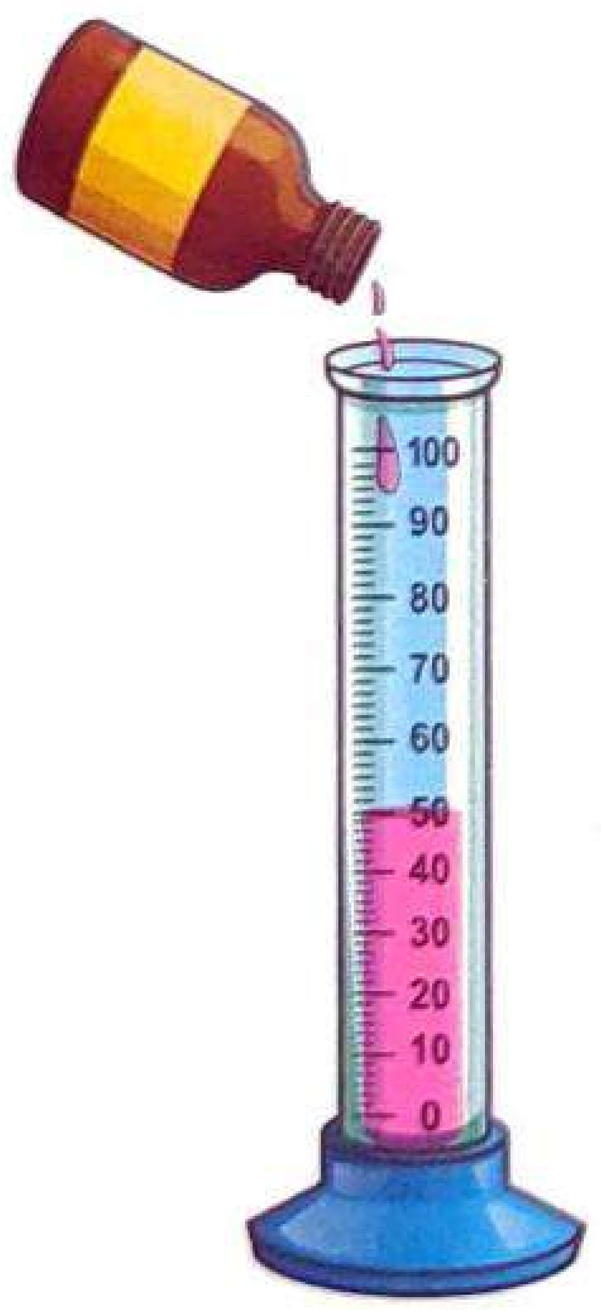



*Vocabulary*

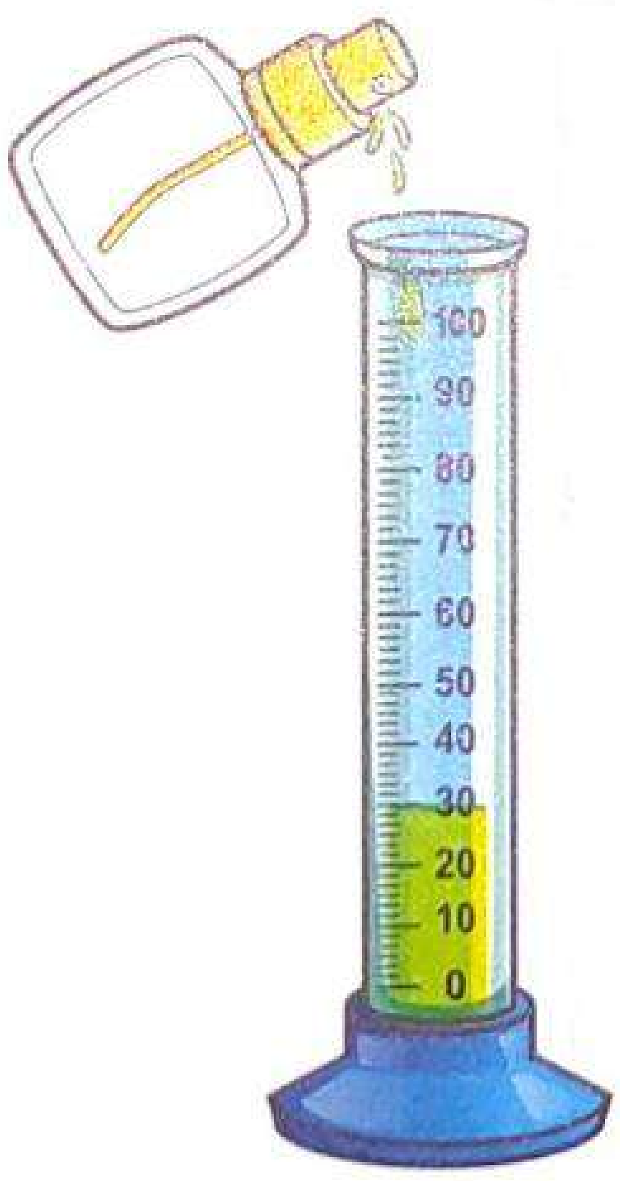
*Graduated cylinder is a graduated tool like ruler from 0 to 100 and the listed numbers are skip counted by 10's and it holds 100 mL*

## Check

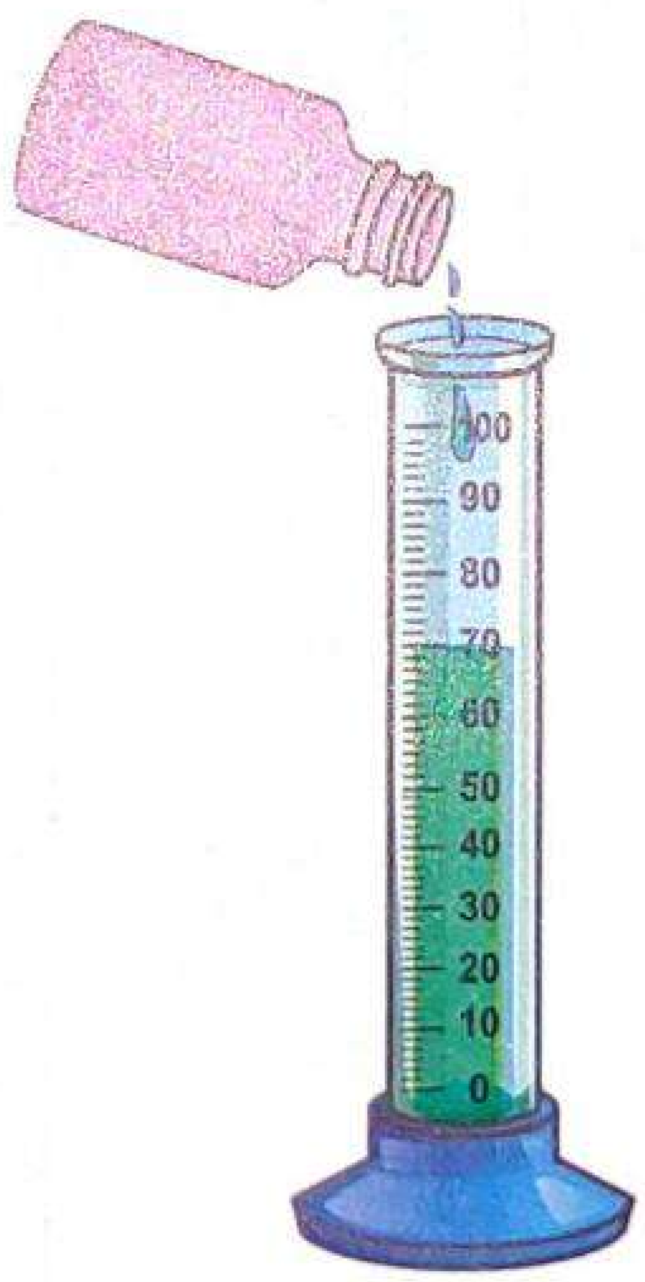
Write the capacity for each of the following.



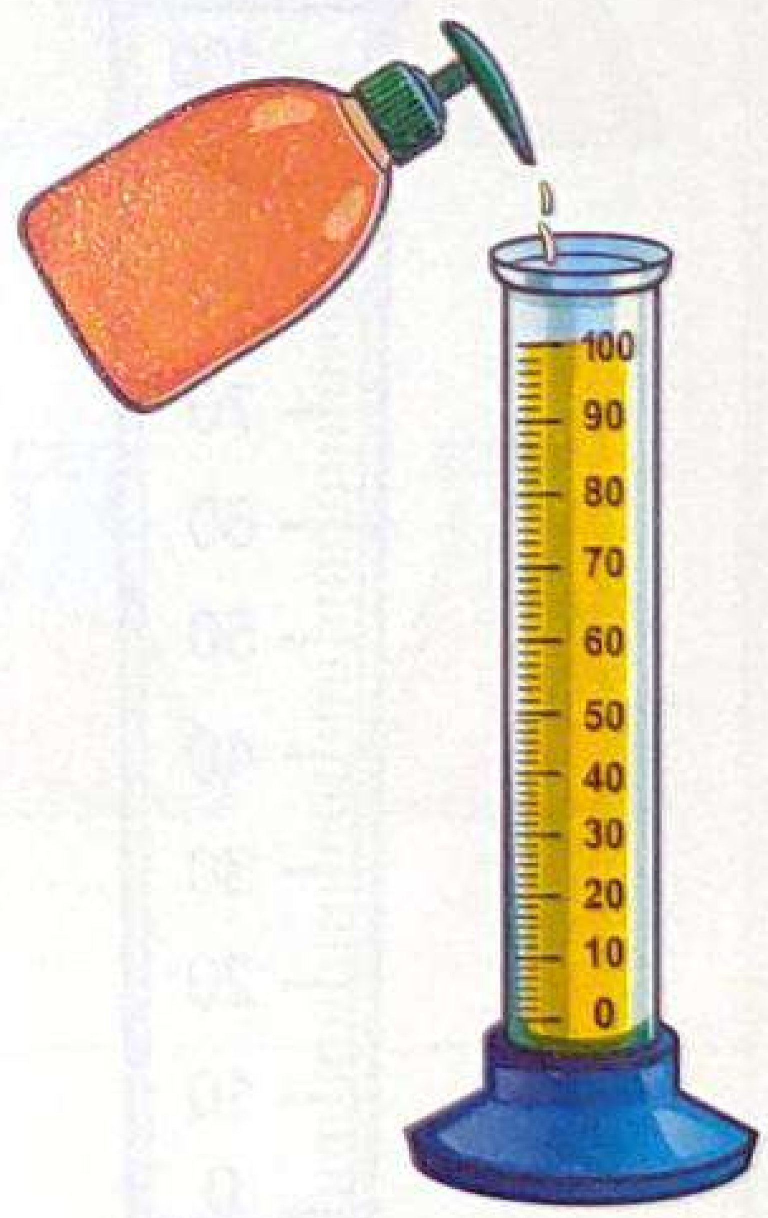
Capacity of  is ______ mL



Capacity of  is ______ mL



Capacity of  is ______ mL

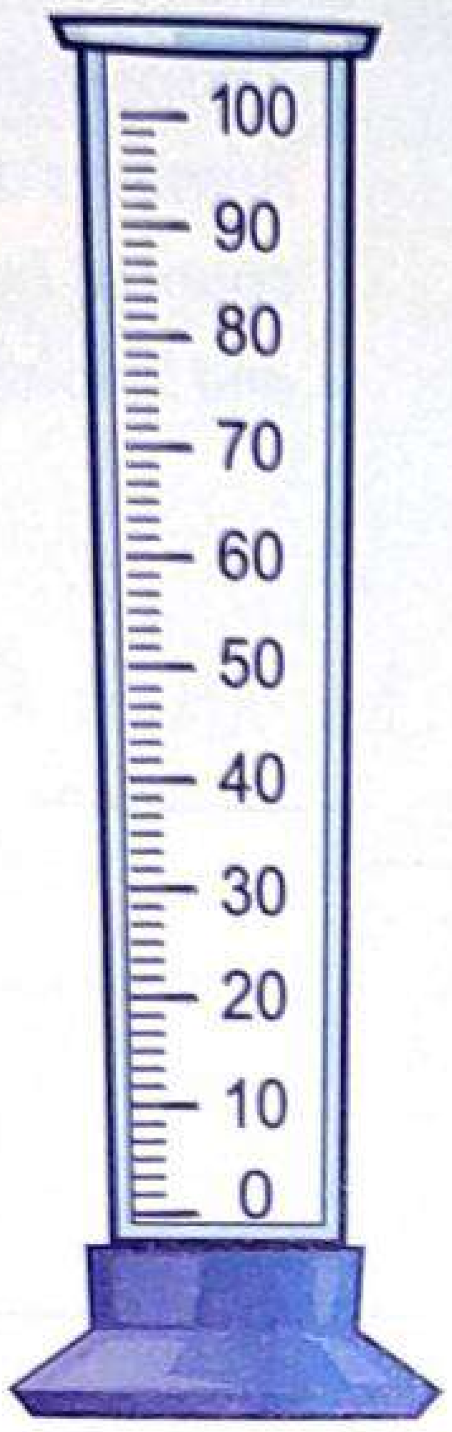


Capacity of  is ______ mL

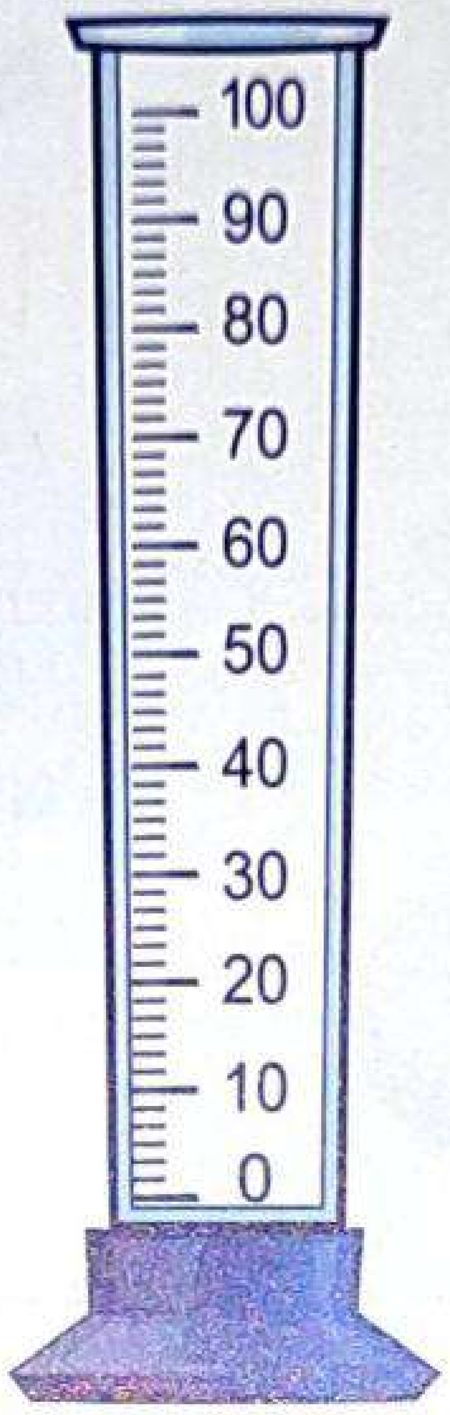
• Let your child use a graduated cylinder to measure a small milk box.

## Practice

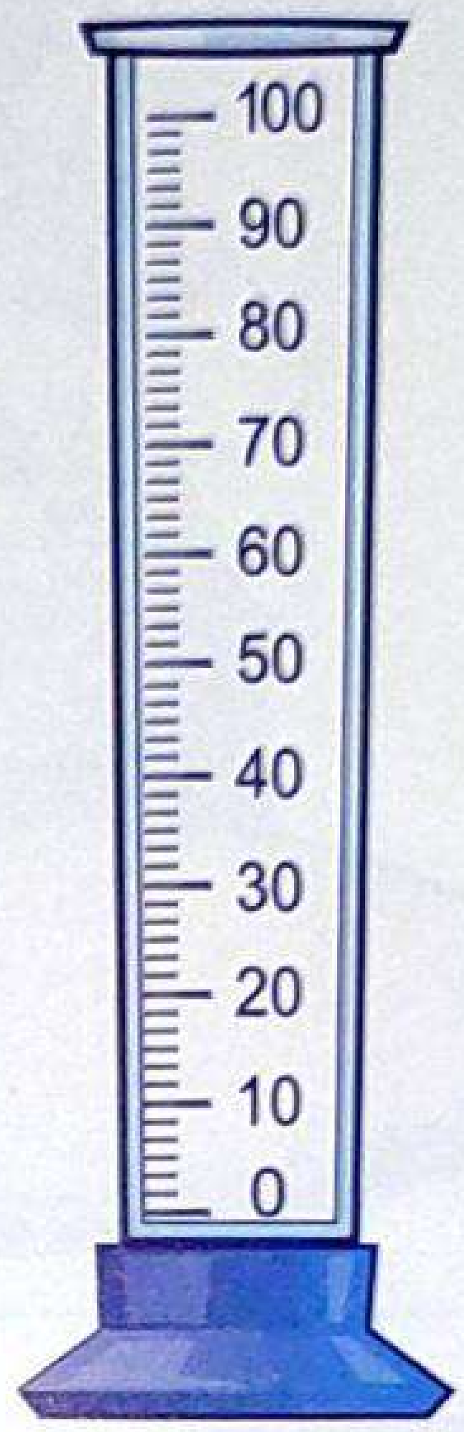
Color to reach the given measures.



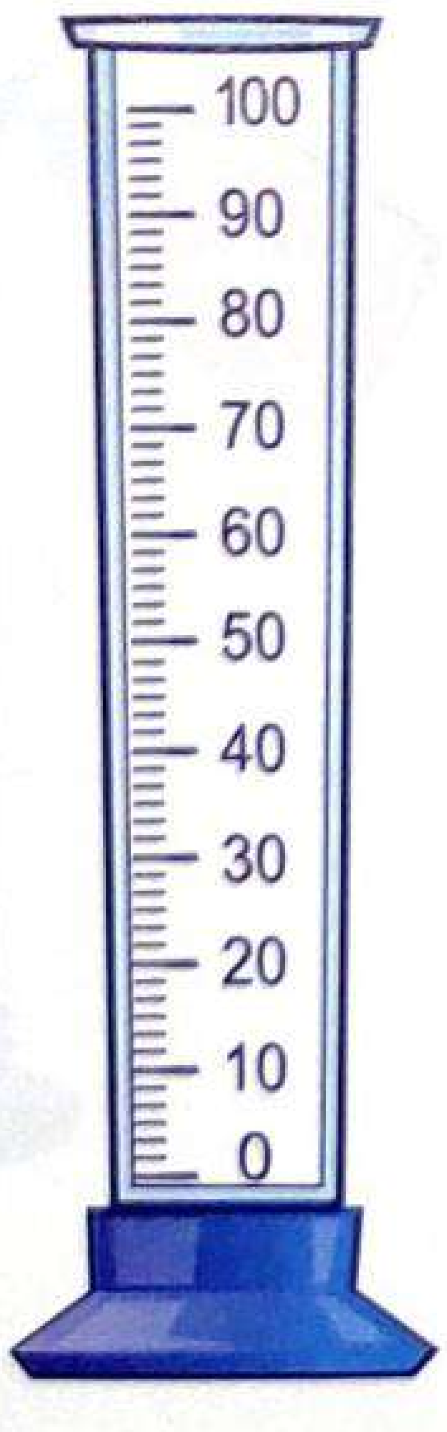

**30 mL**



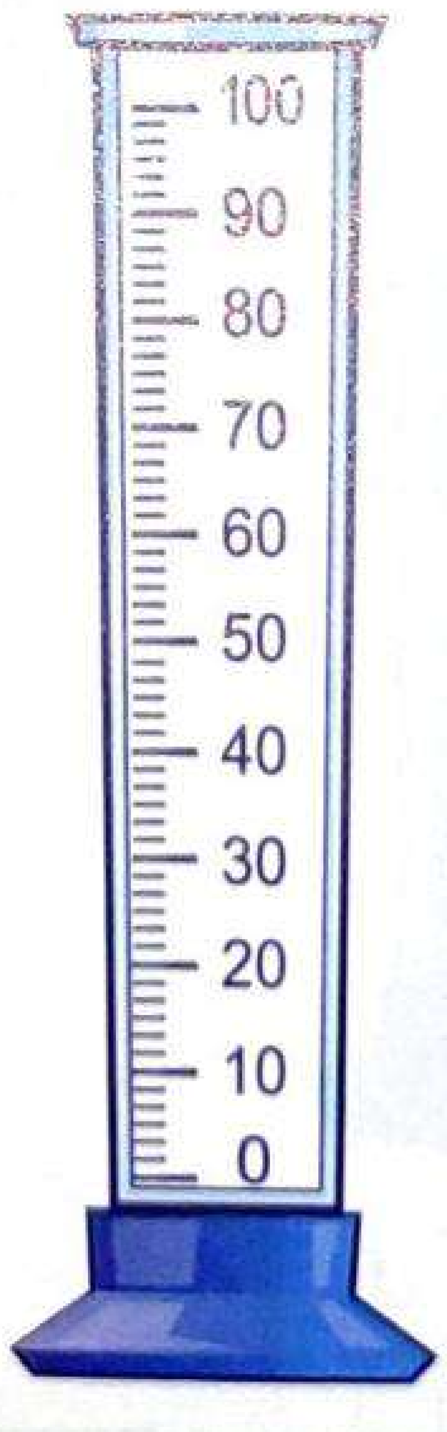

**80 mL**



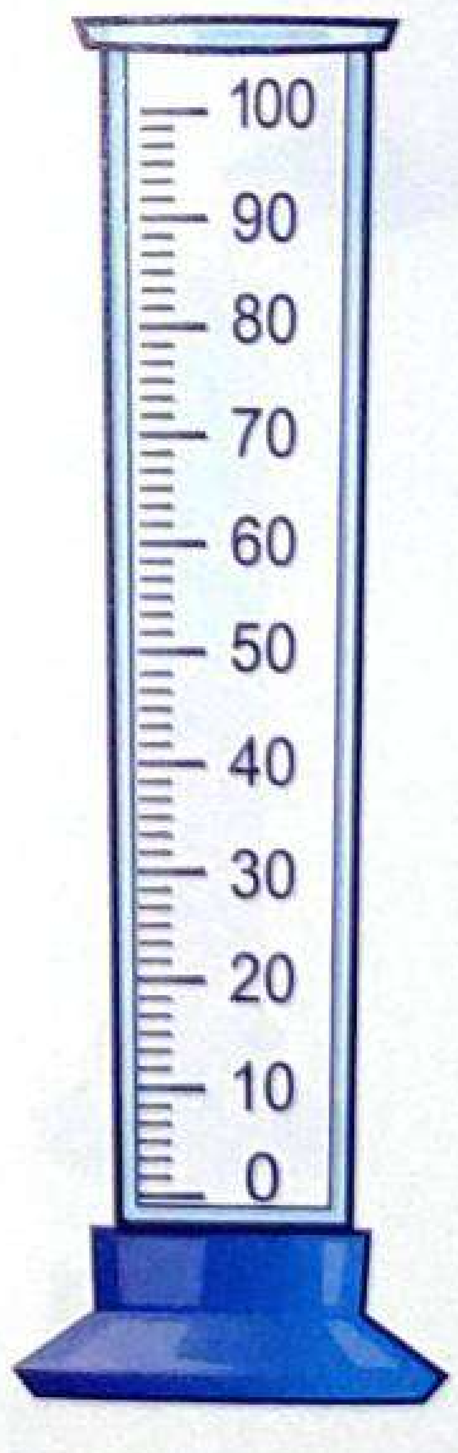

**50 mL**




**100 mL**




**10 mL**




**70 mL**

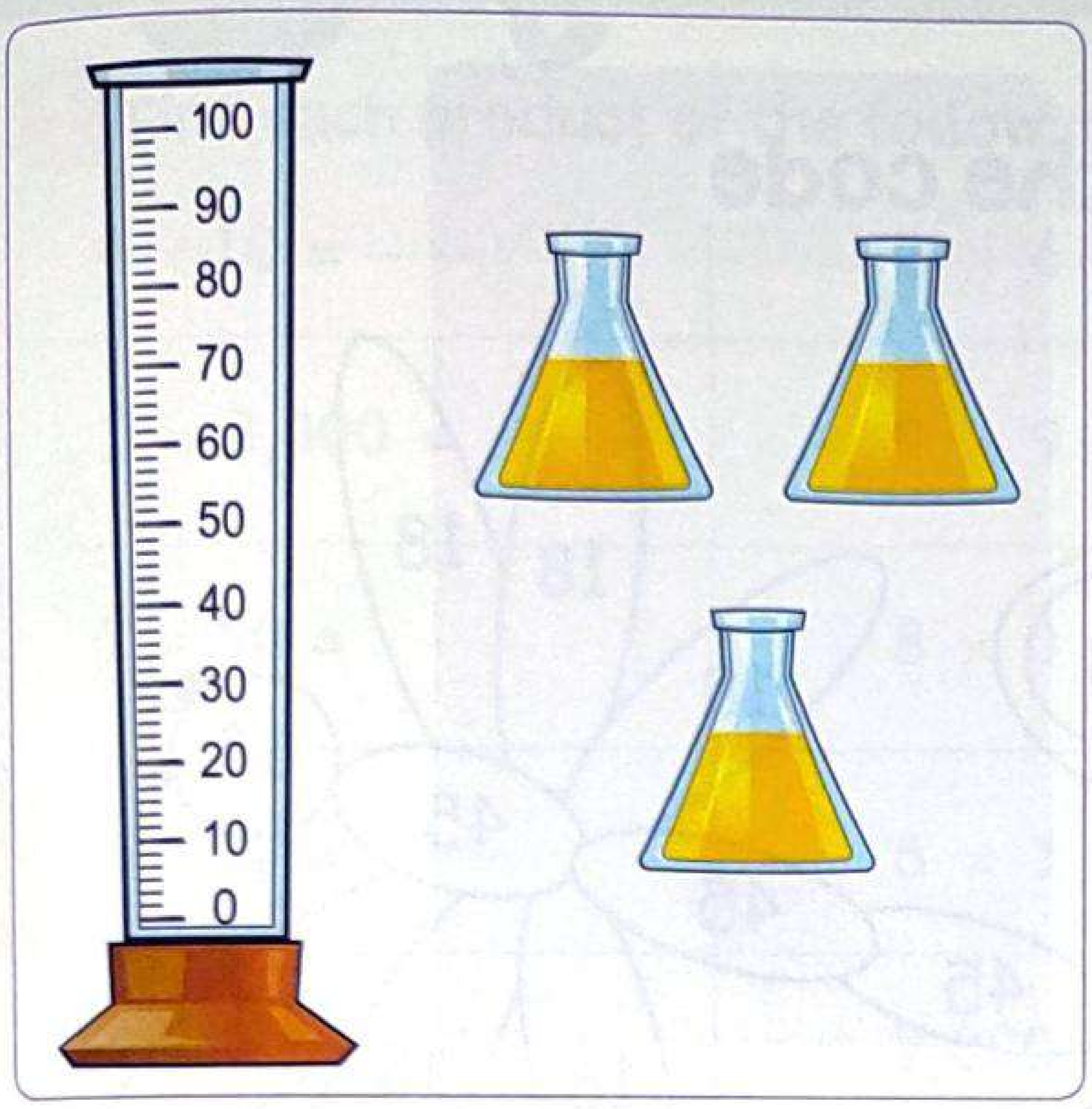
**Notes for parents**

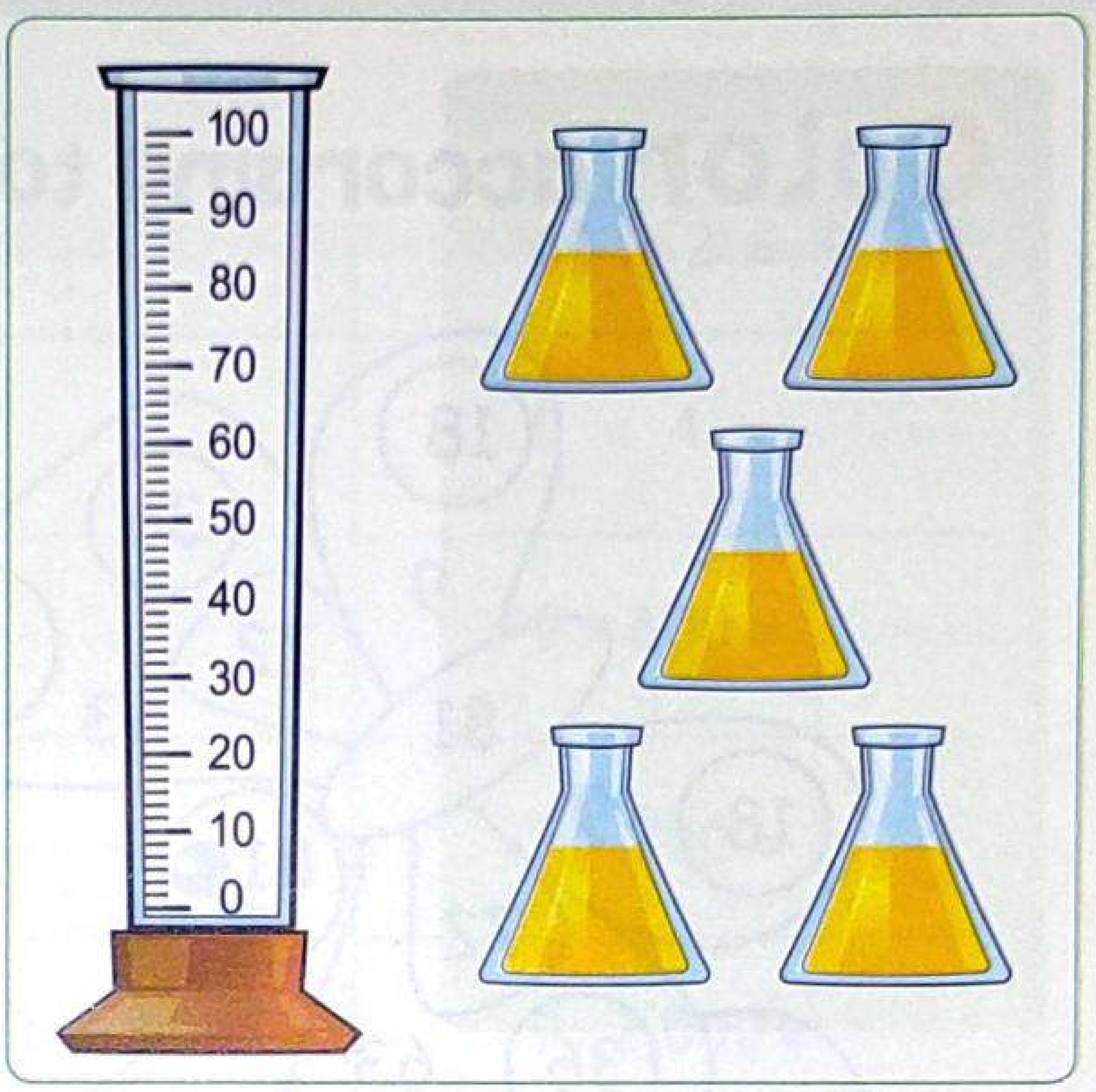
- Ask your child to arrange the previous measures ascendingly.

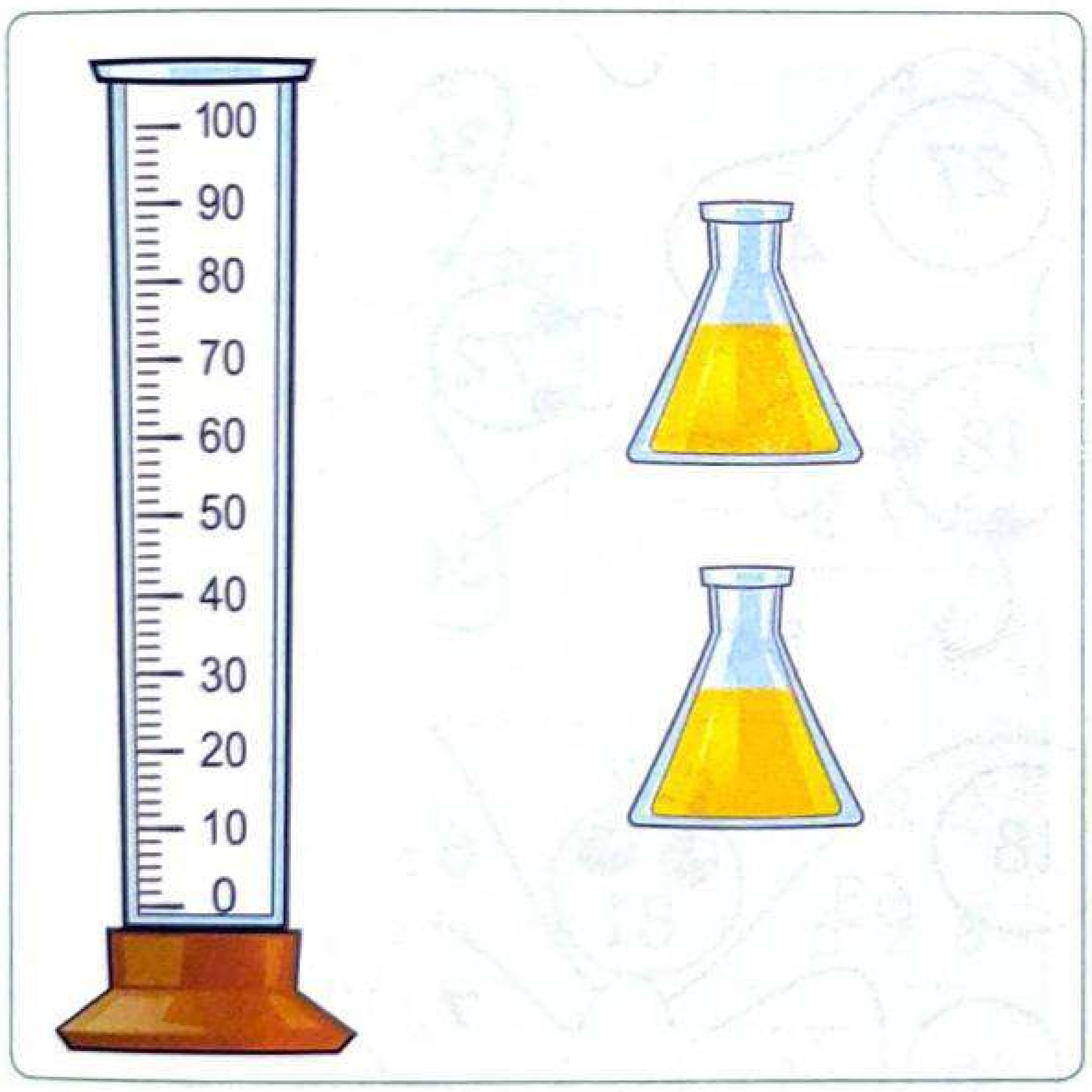
Color to reach the required measures.

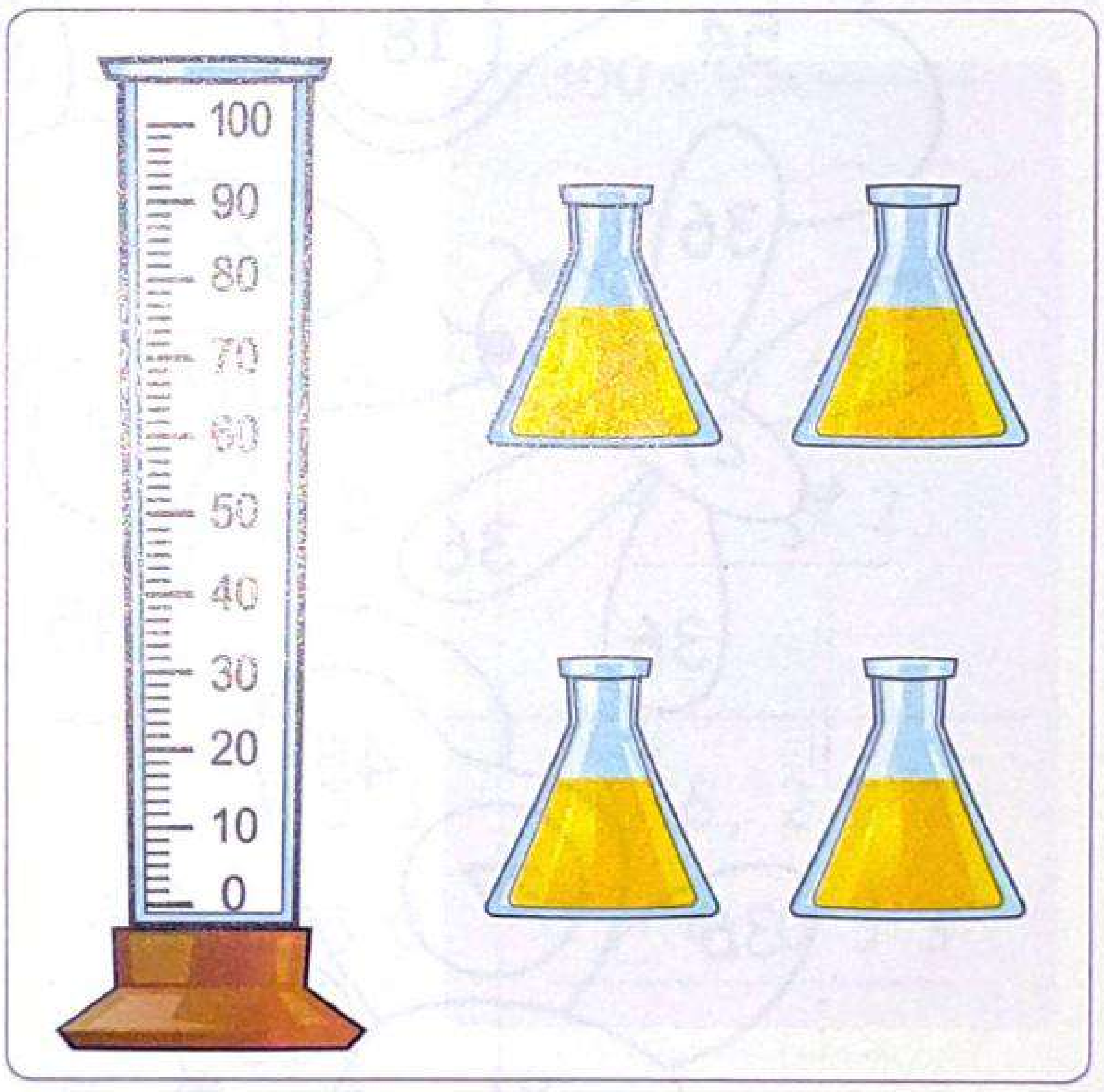


= 20 mL




## • Critical thinking :

Sameh drank 1300 mL of water.

**How much more or less than 1 L did he drink ?**

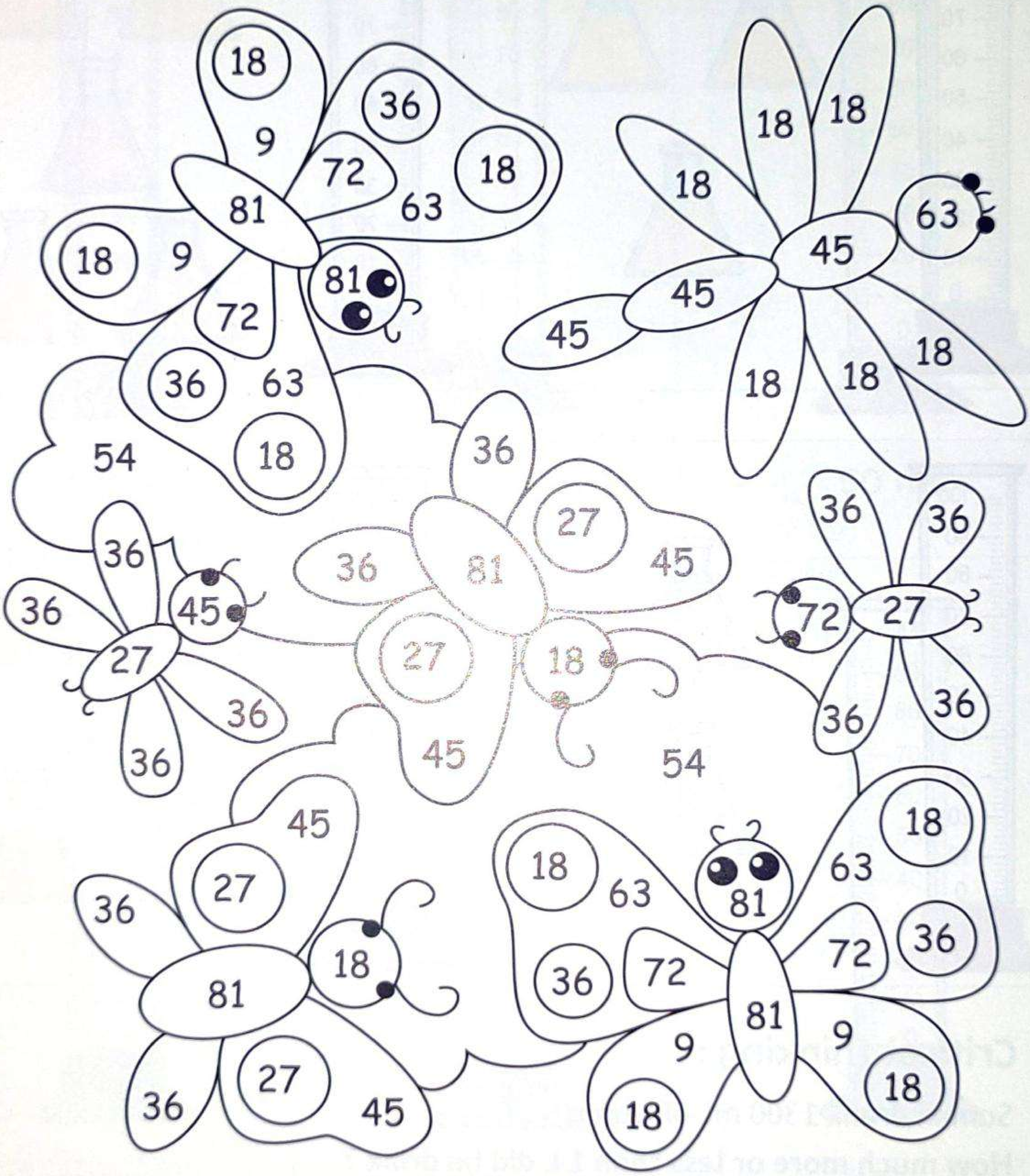
_______________________________________________

• Remind your child about the relation between liter and milliliter.

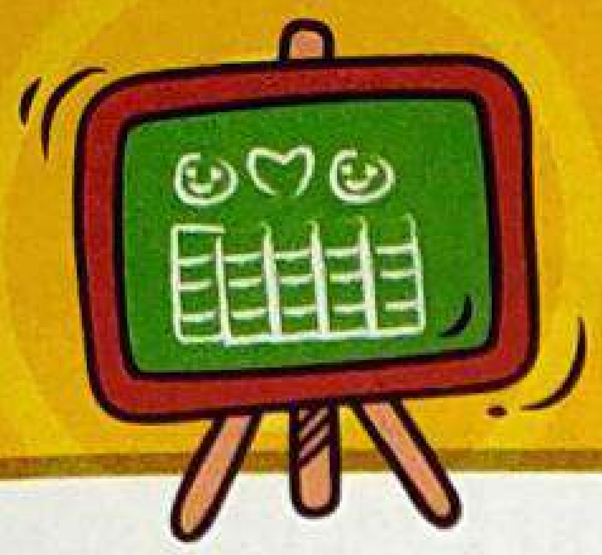
Place a smiley face

# Activity
## Chapter 6

### Color according to the code




| 9×1 | 9×2 | 9×3 | 9×4 | 9×5 | 9×6 | 9×7 | 9×8 | 9×9 |
|---|---|---|---|---|---|---|---|---|



# Extra Practice

## Chapter 6

**1** Find each product of the following.

| | | |
|---|---|---|
| $4 \times 10 =$ ____ | $2 \times 6 =$ ____ | $60 \times 3 =$ ____ |
| $1 \times 3{,}000 =$ ____ | $9 \times 9 =$ ____ | $0 \times 4 =$ ____ |
| $7 \times 50 =$ ____ | $8 \times 0 =$ ____ | $9 \times 600 =$ ____ |
| $8 \times 4 =$ ____ | $6 \times 1 =$ ____ | $2 \times 700 =$ ____ |
| $9 \times 8 =$ ____ | $7{,}000 \times 3 =$ ____ | $9 \times 2{,}000 =$ ____ |
| $5 \times 4{,}000 =$ ____ | $1 \times 8{,}000 =$ ____ | $300 \times 9 =$ ____ |

**2** Add or subtract.

| | | | |
|---|---|---|---|
| $138 + 567 =$ ____ | $653 - 296 =$ ____ | $529 - 188 =$ ____ | $784 + 92 =$ ____ |
| $458 - 367 =$ ____ | $582 + 528 =$ ____ | $1{,}255 + 2{,}150 =$ ____ | $6{,}202 - 4{,}053 =$ ____ |
| $8{,}300 - 2{,}150 =$ ____ | $2{,}780 + 3{,}430 =$ ____ | $4{,}130 + 524 + 64 =$ ____ | $20 + 135 + 2{,}142 =$ ____ |

• In this practice your child will review on all what he/she had learned in chapter 6.

**3** Write the place value of the colored digit in each number.

| Number | Place value | Number | Place value |
|---|---|---|---|
| **1**29,456 | | 26,**5**08 | |
| 398,6**7**2 | | 3**0**4,467 | |
| **4**,069 | | **4**17,900 | |
| 9**3**,245 | | 165,2**3**7 | |

**4** Write the value of the colored digit in each number.

| Number | Value | Number | Value |
|---|---|---|---|
| 56**7**,211 | | 2**0**1,241 | |
| **3**1,497 | | 85,00**2** | |
| 4**9**8,001 | | **9**,136 | |
| **7**0,835 | | **7**08,350 | |

**5** Put > , < or = .

| | | | | | |
|---|---|---|---|---|---|
| 4,265 | ◯ | 4,189 | 38,206 | ◯ | 38,106 |
| 669,384 | ◯ | 669,382 | 905,643 | ◯ | 905,593 |
| 12,000 | ◯ | 12 hundreds | 15 thousands | ◯ | 1,500 tens |
| 93,257 | ◯ | 309,257 | 1,025 | ◯ | 1,005 |
| 5,035 + 30,000 | ◯ | 35 + 35,000 | 31,508 | ◯ | thirty thousand, five hundred eight. |

**6** **Solve the following story problems.**

- Bassem bought 5 books to read. Each book costs 90 pounds.

**How much money did Bassem pay ?**

______________________

______________________

______________________

- Amgad has 5,000 L.E. He bought a new mobile for 3,550 L.E.

**Find the remainder with Amgad.**

______________________

______________________

______________________

- In a fruit farm, there are 475 mango trees and 516 orange trees.

**Find the number of all trees in this farm.**

______________________

______________________

______________________

- Yousra had 3,000 pounds. She spent 1,250 pounds at the market and 375 pounds at the butcher shop.

**How much money were left with her ?**

______________________

______________________

______________________

**7** **The following table represents the number of shirts in stock of a store. Use the information to answer the questions.**

- How many small and medium shirts are there in stock ?

______________________.

- How many small and large shirts are there in stock ?

______________________.

- How many more medium shirts than large shirts are there in stock ?

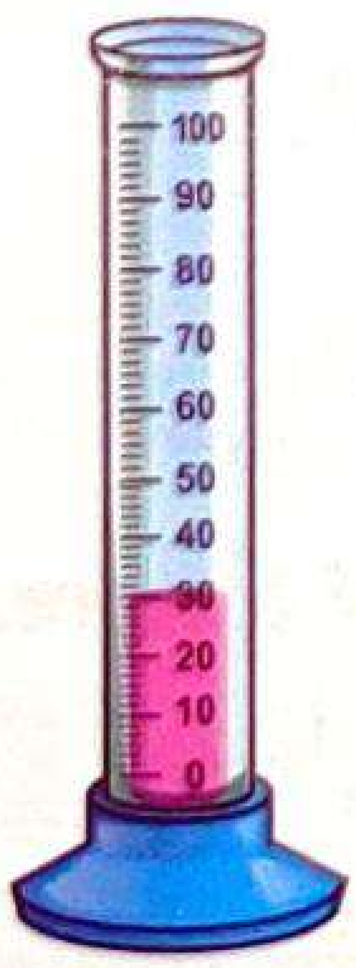
______________________.

| Number of shirts | |
|---|---|
| **Size** | **Number** |
| Small | 538 |
| Medium | 2,170 |
| Large | 1,645 |

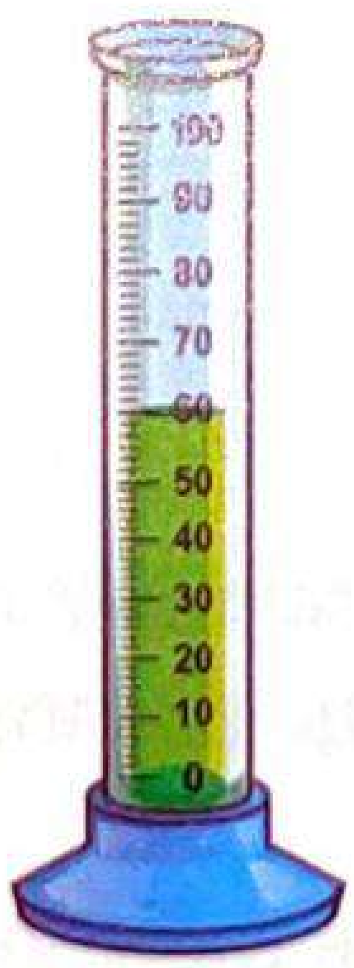
## 8 Circle the correct answer.

| | | |
|---|---|---|
|  200 mL 200 L |  2 mL 2 L |  350 mL 350 L |
|  4 mL 4 L |  10 mL 10 L |  50 mL 50 L |

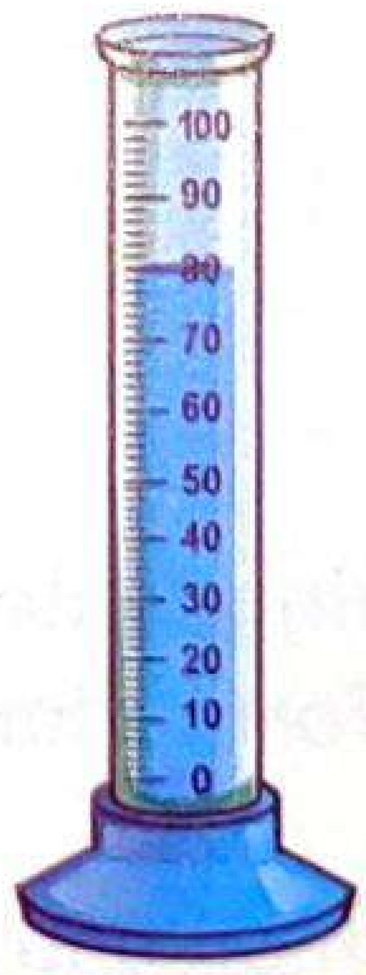
## 9 How many mL are there ?




______



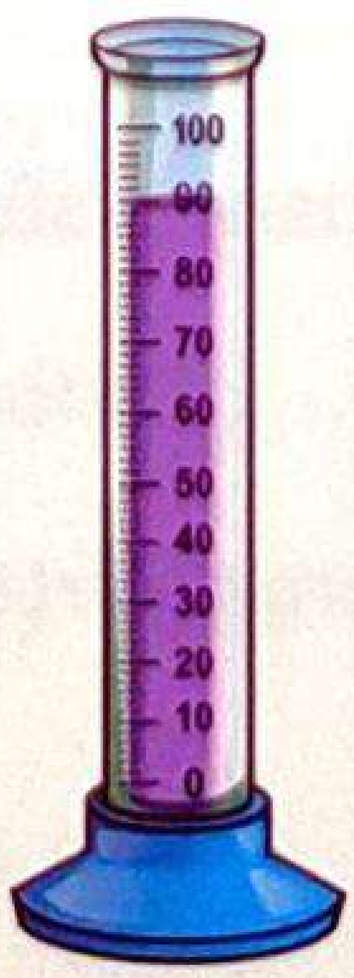

______



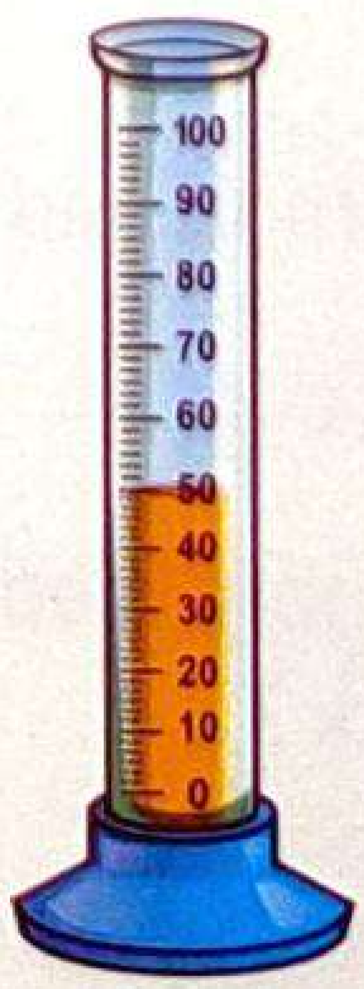

______




______




______




______

# Assessment

## Chapter 6

**1** Choose the correct answer.

① ______ – 269 = 372

- ◯ 103
- ◯ 475
- ◯ 641
- ◯ 117

② 20 thousands = ______ tens.

- ◯ 20
- ◯ 200
- ◯ 2,000
- ◯ 20,000

③ 3 × 7,000 = ______

- ◯ 2,100
- ◯ 21,000
- ◯ 210
- ◯ 21

④ The value of the digit 4 in the number 542,098 is ______

- ◯ 400,000
- ◯ 40,000
- ◯ 4,000
- ◯ 400

⑤ 806,257 < ______

- ◯ 752,608
- ◯ 806,255
- ◯ 806,258
- ◯ 257,808

⑥ 8 × ______ = (8 × 5) + (8 × 2)

- ◯ 10
- ◯ 3
- ◯ 8
- ◯ 7

**2** Find the result.

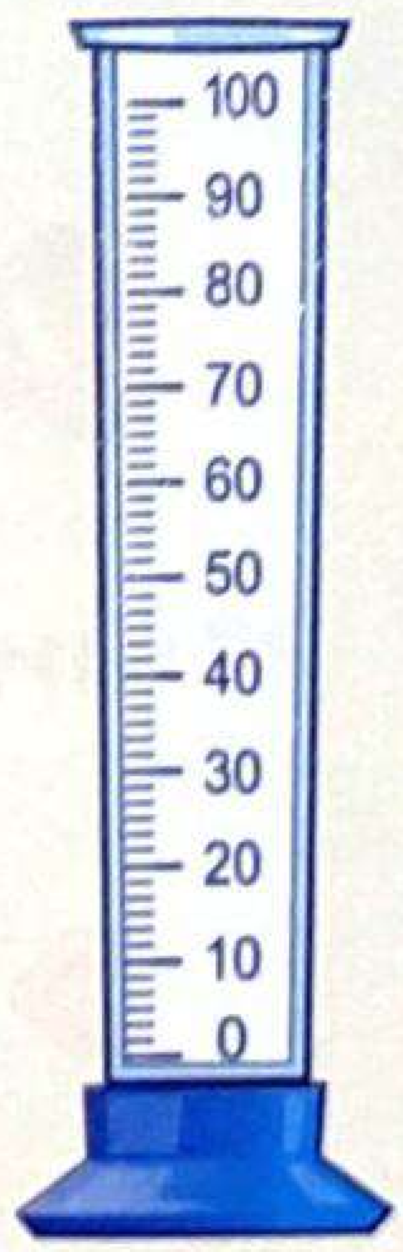
$$\begin{array}{r} 529 \\ +\ 356 \\ \hline \end{array}$$

$$\begin{array}{r} 6,650 \\ -\ 2,800 \\ \hline \end{array}$$

**3** Color to reach the required measure.

Key :  = 30 ml






**4** Sama's family saved 7,000 L.E. to buy a new TV and speaker. If the TV costs 4,500 L.E. and the speaker costs 375 L.E.

**How much money were left with Sama's family ?**

______________________________

EL-MOASSER

# Mathematics

FREE PART 1

## FINAL ASSESSMENTS

By a group of supervisors



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FIRST TERM

# Final Assessments



# Model 1

## 1 Choose.

a) 84 cm = ________ mm

◯ 84 ◯ 840 ◯ 8,400

b) 7,325 ☐ 999

◯ > ◯ < ◯ =

c) 700 + 30,000 + 5 + 80 = ________

◯ 3,785 ◯ 30,785 ◯ 37,850

d) ________ is a multiple of 3

◯ 12 ◯ 8 ◯ 14

e) How many vertices are there in a parallelogram ?

◯ 2 ◯ 4 ◯ 6

f) $9 \times 6 = (9 \times 4) + (9 \times$ ______ $)$

◯ 9 ◯ 5 ◯ 2

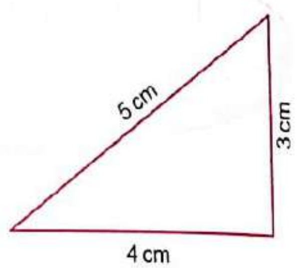
## 2 Complete.

a) $3 \times 400 =$ ________

b) Four hundred fifty-one thousands, three hundred thirty-one in standard form is ________

c) 7,315 + 1,283 = ________

d) The perimeter of the opposite polygon = ______ + ______ + ______ = ______ cm




e) $24 \div 4 =$ ________

f) The minute hand will point to number ________ when 45 minutes have passed.

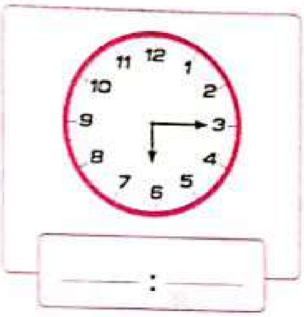
## 3 Answer the following.

ⓐ Ahmed has 15 eggs and wants to put them equally in 5 plates.

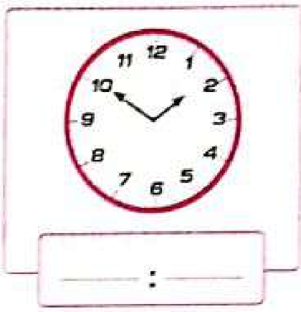
How many eggs are there in each plate ?

The number of eggs in each plate = ____________

ⓑ Write the time in two ways.




It's ____________




It's ____________

ⓒ Find the perimeter and the area of each figure.

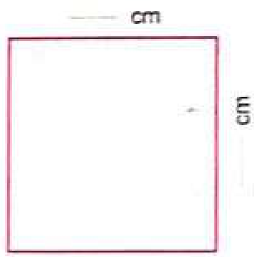



• Perimeter = ___ + ___ + ___ + ___

= ___ cm

• Area = ___ × ___

= ___ square centimeters




• Perimeter = ___ + ___ + ___ + ___

= ___ cm

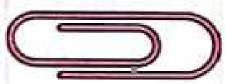
• Area = ___ × ___

= ___ square centimeters

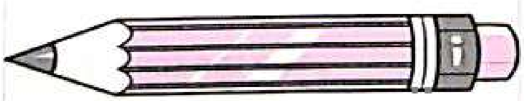
ⓓ Use a ruler to measure the length of each of the following.




______ mm



______ mm



______ mm



______ mm

# Model 2

## 1 Choose.

ⓐ The place value of the digit 4 in the number 48,205 is ........

◯ hundred thousands ◯ ten thousands ◯ thousands

ⓑ $2 \times$ ........ $= 4 + 4 + 4$

◯ 2 ◯ 4 ◯ 6

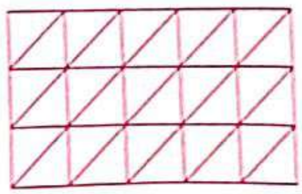
ⓒ ........ is a common multiple of 2 and 3

◯ 4 ◯ 12 ◯ 8

ⓓ 20,004 ☐ 4,002

◯ > ◯ < ◯ =

ⓔ The area of the opposite figure = ........ ☐



◯ 8 ◯ 15 ◯ 30

ⓕ $300 \times 4 =$ ........

◯ 12 ◯ 120 ◯ 1,200

## 2 Complete.

ⓐ $7 \times 8 =$ ........

ⓑ 25,607 in expanded form is ........ + ........ + ........ + ........

ⓒ The perimeter of the rectangle which its dimensions are 5 cm and 6 cm is ........ cm

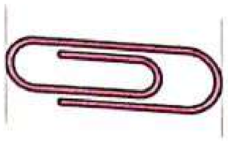
ⓓ The examples for parallelograms are : ........ , ........ and ........

ⓔ 3 liters = ........ mL

ⓕ 20 , 24 , 28 , 32 , ........ , ........ , ........ (in the same pattern)

## 3 Answer the following.

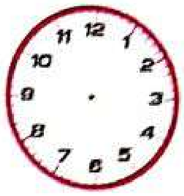
(a) Measure the length in mm.



[ ] mm

(b) Draw the clock hands which represent the digital clock.

5 : 40




(c) Arrange the following numbers in a descending order.

15,001 | 50 thousands | 105,000 | 501 hundreds

The order is : ............ , ............ , ............ , ............

(d) There are 6 apples in a box.
How many apples are there in 9 boxes ?

..............................................................

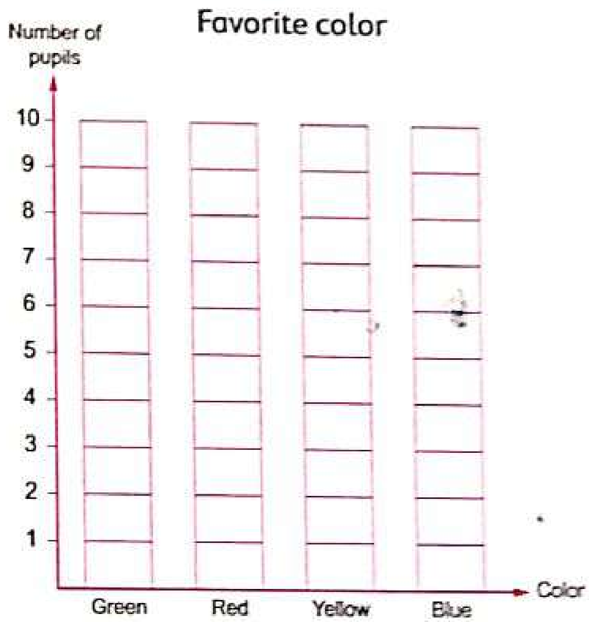
(e) Find the results.

```
   5 8 7
 + 2 3 9
 -------
 .......
```

```
   4 , 4 2 8
 - 1 , 1 5 3
 -----------
   .........
```

(f) Count the tallies. Write the total. Color the graph to show the data.

| Favorite color | | |
|---|---|---|
| **Color** | **Tally** | **Number** |
| Green | 𝍸 | ...... |
| Red | 𝍸 \|\|\|\| | ...... |
| Yellow | \|\|\|\| | ...... |
| Blue | 𝍸 \|\| | ...... |



# Model 3

## 1 Choose.

ⓐ 2 ........ 0 = 0

◯ $+$ ◯ $-$ ◯ $\times$

ⓑ ........ is a common multiple of 5 and 10

◯ 25 ◯ 30 ◯ 15

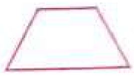
ⓒ The value of the digit 5 in 752,386 is ........

◯ 500 ◯ 5,000 ◯ 50,000

ⓓ $5 \times 8$ ☐ $4 \times 10$

◯ $>$ ◯ $<$ ◯ $=$

ⓔ Which of the following does not represent a polygon ?

◯  ◯  ◯ 

ⓕ $6 \div 3 =$ ........

◯ 18 ◯ 2 ◯ 3

## 2 Complete.

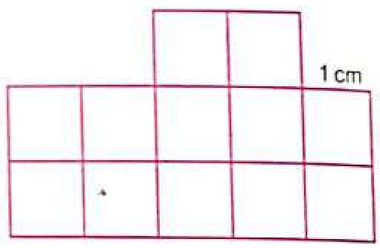
ⓐ 5 thousands = ........ tens.

ⓑ 7 liters = ........ milliliters.

ⓒ The factors of 4 are ........ , ........ , ........

ⓓ 13 , 17 , 21 , ........ (in the same pattern)

ⓔ The area of the opposite figure = ........ square centimeters




ⓕ 7,592 – 4,317 = ........

## 3 Answer the following.

(a) Sameh has 153 marbles , Marwan has 223 marbles.

How many marbles do they have all together ?

.................................................................

.................................................................

(b) Write the numbers in order from least to greatest.

| 325,261 | 532,272 | 24,362 | 532,271 |
|---|---|---|---|

The order is : ............ , ............ , ............ , ............

(c) Create an array.

| 4 rows of 2 | 3 columns of 5 |
|---|---|
| | |

(d) Our Math lesson started at 10:00.

It finished at




Math lesson took ............ minutes.

# Model 4

## 1 Choose.

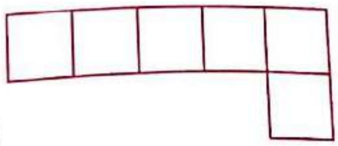
ⓐ 232 thousands and 4 ☐ 232,400

◯ >  ◯ <  ◯ =

ⓑ ________ is a multiple of 2

◯ 13  ◯ 15  ◯ 20

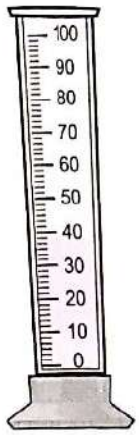
ⓒ The perimeter of the opposite figure is ________ units.



◯ 14  ◯ 15  ◯ 13

ⓓ $3 \times 80 =$ ________

◯ 24  ◯ 240  ◯ 2,400




ⓔ How many mL are there ?

◯ 40  ◯ 30  ◯ 20

ⓕ $9 \times 8 =$ ________

◯ 63  ◯ 18  ◯ 72

## 2 Complete.

ⓐ 78,032 = ________ + ________ + ________ + ________

ⓑ $24 \div 8 =$ ________

ⓒ $5 \times 8 = (5 \times 5) + (5 \times$ ____ $)$

ⓓ ________ tens = 800

ⓔ 7,453 + 3,572 = ________

ⓕ ◯ ◇ ◯ ◇ ◯ ◇ ________ (in the same pattern)

## 3 Answer the following.

ⓐ Name each figure and write the missing number.

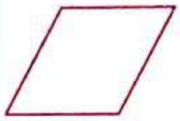


Name : ..................

☐ equal sides

☐ pair of parallel sides

☐ vertices



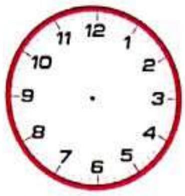
Name : ..................

☐ pair of equal sides

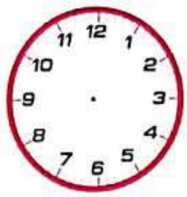
☐ pair of parallel sides

☐ vertices

ⓑ Draw the clock hands.



8 : 10



7 : 40

ⓒ Sarah has 4 packets of sweets each with 5 pieces of sweets in.
How many pieces of sweets Sarah has ?

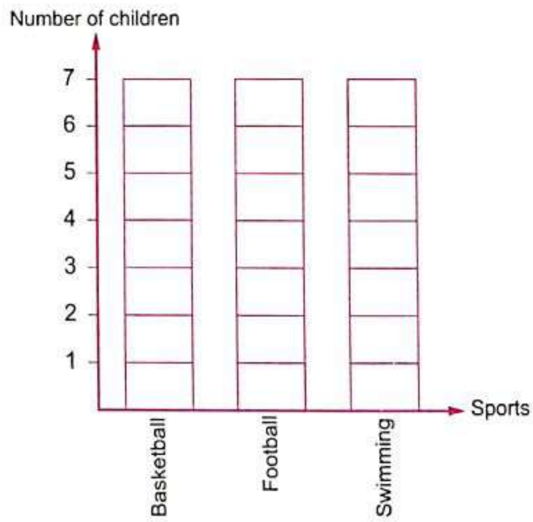
..................................................

..................................................

..................................................

ⓓ Count the tallies. Write the total. Color the graph.

| Favorite sports | | |
|---|---|---|
| Sport | Tally | Number |
| Basketball | \|\|\| | ........ |
| Football | 𝍸 \|\| | ........ |
| Swimming | 𝍸 \| | ........ |



# Model 5

**1** Choose.

a) What number will the minute hand point to when 40 minutes have passed ?

◯ 7　◯ 8　◯ 9

b) $2 \times 6 =$ ......

◯ $4 \times 5$　◯ $3 \times 4$　◯ $12 \times 0$

c) The value of the digit 0 in the number 301,532 is ......

◯ 0　◯ 1,000　◯ 10,000

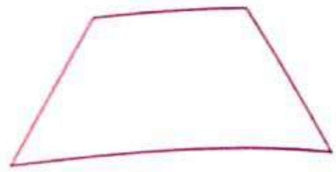
d) 700 mm = ...... cm

◯ 70　◯ 7　◯ 7,000

e) Which of the following does not represent a polygon ?

◯ pentagon　◯ rectangle　◯ circle

f) The name of the opposite figure is ......



◯ square　◯ trapezium

◯ parallelogram

**2** Complete.

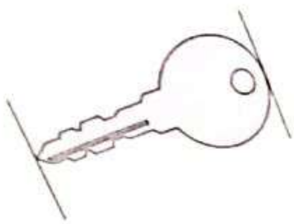
a) Three thousand , two hundred five in standard form is ......

b) 7,400 – 3,213 = ......

c) ...... $\times 9 = 45$

d) 94 , 84 , 74 , ...... , ...... (in the same pattern)

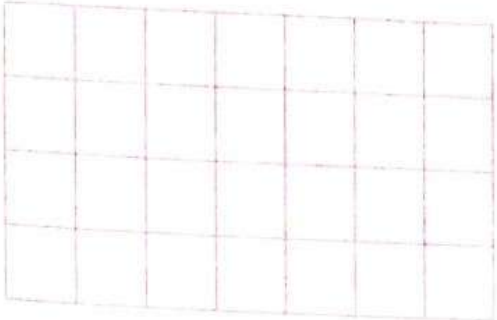
e) The length of the opposite figure = ...... cm



f) The factors of 12 are : ...... , ...... , ...... , ...... , ...... , ......

## 3 Answer the following.

ⓐ Draw a rectangle of perimeter 8 length units in the grid and find its area.



The area = .............. square units

ⓑ 325 + 137 + 241 = ..............

= ..............

ⓒ Find the result.

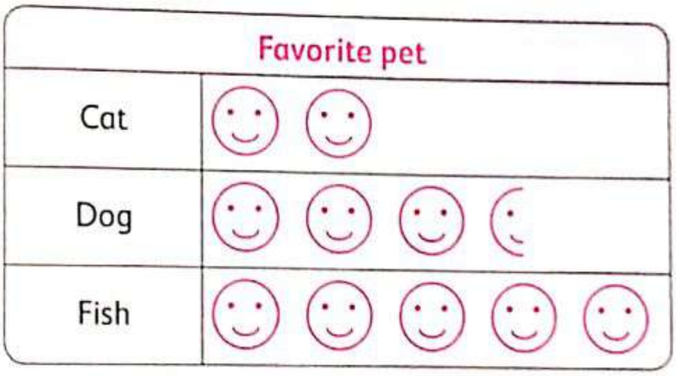
(1) 7 × 8 = ..............

(2) 5 × 7 = ..............

(3) 18 ÷ 2 = ..............

(4) 1 × 8 = ..............

ⓓ Use the key in pictograph to complete the tally table.




| Favorite pet | |
|---|---|
| **Pet** | **Tally** |
| Cat | |
| Dog | |
| Fish | |



# Model 6

## 1 Choose.

ⓐ 2 × 500 ☐ 999 + 1

◯ > ◯ < ◯ =

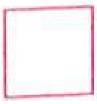
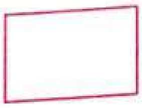
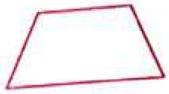
ⓑ 6 + 6 + 6 + 6 = ........ × 6

◯ 2 ◯ 4 ◯ 6

ⓒ 800 mm = ........ cm

◯ 8 ◯ 80 ◯ 88

ⓓ Which of the following does not represent a parallelogram ?

◯  ◯  ◯ 

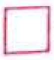
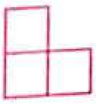
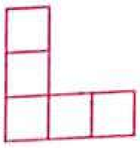
ⓔ 2 thousands = ........ hundreds.

◯ 2 ◯ 20 ◯ 200

ⓕ 648 + 9,000 = ........

◯ 90,648 ◯ 9,648 ◯ 64,809

## 2 Complete.

ⓐ  ,  ,  , ........ , ........ (in the same pattern)

ⓑ Nine hundred sixty-eight thousands, four hundred thirty-one in standard form is ........

ⓒ 42 ÷ 7 = ........

ⓓ The smallest number that can be formed from the digits 3 , 0 , 4 , 5 , 6 , 2 is ........

ⓔ The number which the minute hand points to when 20 minutes have passed is ........

ⓕ 7,326 – 5,296 = ........

## 3 Answer the following.

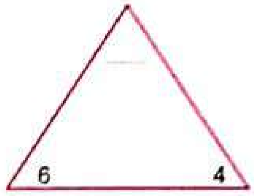
ⓐ Find the answer.

134 + 97 + 215 + 345 = ( ............ ) + ( ............ ) = ............

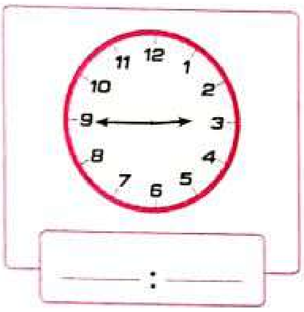
ⓑ Find the product. Write the fact family.

.... × .... = ........ | .... × .... = ........

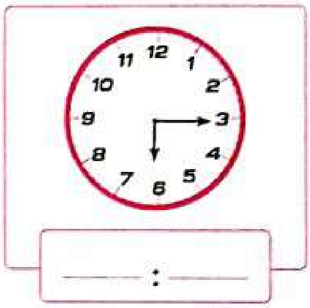
.... ÷ .... = ........ | .... ÷ .... = ........




ⓒ Write the time.




It is ........................




It is ........................

ⓓ The school library had 5,775 books for borrowing. During one week 1,580 of them were borrowed and 370 books were missed.
How many books are there in the library right now ?

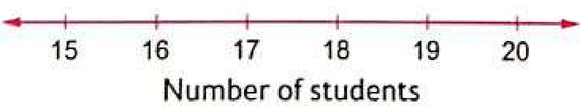
..............................................................

..............................................................

ⓔ Use the table to draw a line plots.

Marks of students in an exam






**Key** Each x = .... student

| Marks of students in an exam | |
|---|---|
| Marks | Number of students |
| 15 | 3 |
| 16 | 1 |
| 17 | 4 |
| 18 | 6 |
| 19 | 4 |
| 20 | 2 |

# Model 7

## 1 Choose.

(a) The number of vertices of a hexagon = ........

○ 3 ○ 5 ○ 6

(b) $60 \times 3 =$ ........

○ 18 ○ 180 ○ 120

(c) ........ is a multiple of 3

○ 6 ○ 8 ○ 10

(d) The value of the digit 3 in the number 324,510 is ........

○ 300 ○ 3,000 ○ 300,000

(e) 150 thousands ☐ 1,500 hundreds

○ $>$ ○ $<$ ○ $=$

(f) ........ $= (8 \times 4) + (8 \times 5)$

○ $8 \times 9$ ○ $8 \times 8$ ○ $8 \times 5$

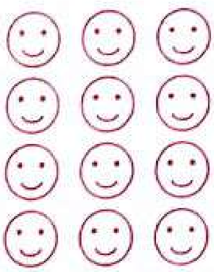
## 2 Complete.

(a) 30 , 32 , 34 , ........ (in the same pattern)

(+ ..., + ..., + ...)

(b) 35 liters = ........ mL

(c)



........ rows of ........

☐ × ☐ = ........

(d) $7 \times 3 =$ ........

(e) $30 \div 5 =$ ........

(f) $20{,}000 + 700 + 50 + 7 =$ ........ (in standard form)

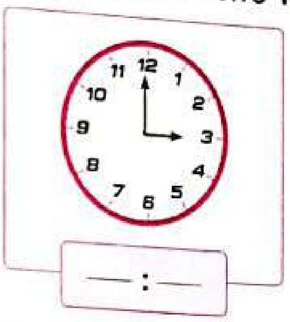
## 3 Answer the following.

ⓐ Arrange in an ascending order.

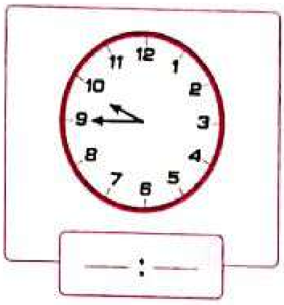
| 734,520 | 97,541 | 725,743 | 97,394 |
|---|---|---|---|

The order is : ______ , ______ , ______ , ______

ⓑ Write the time in two ways.



It's ______



It's ______

ⓒ Find the result.

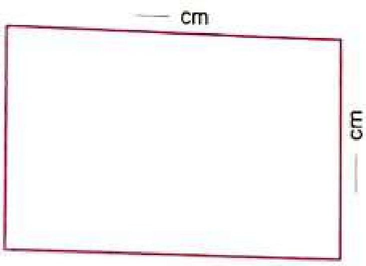
(1) 7,522 + 2,785 = ______

(2) 3,741 – 579 = ______

(3) 7 × 8 = ______

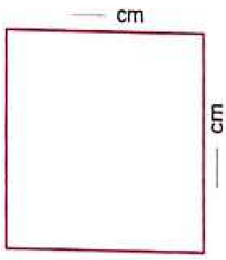
(4) 24 ÷ 3 = ______

ⓓ Find the area and the perimeter of each of the following.




Area = ______ square centimeters

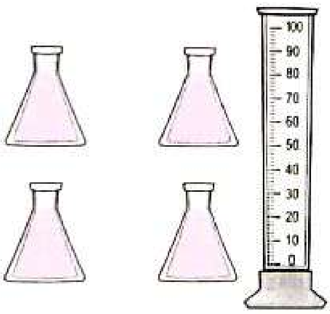
Perimeter = ______ cm

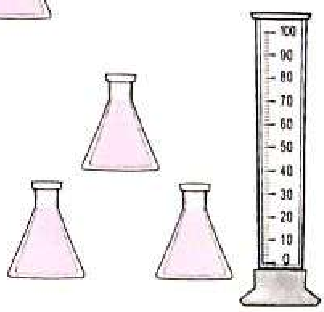



Area = ______ square centimeters

Perimeter = ______ cm

ⓔ Color to reach the required measure.  = 20 mL





# Model 8

## 1 Choose.

a) Forty players are in teams of five. How many teams are there ?

◯ 40 + 5 ◯ 40 ÷ 5 ◯ 40 – 5

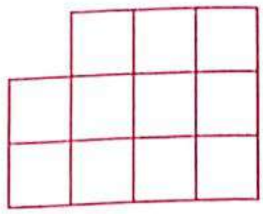
b) ____ × 5 = 5

◯ 0 ◯ 1 ◯ 5

c) ____ = 200 tens

◯ 2,000 ◯ 20 ◯ 200

d) The area of the opposite figure = ____ □



◯ 9 ◯ 10 ◯ 11

e) ____ is a common multiple of 3 and 5

◯ 10 ◯ 6 ◯ 30

f) 4 + 4 + 4 + 4 + 4 = 4 × ____

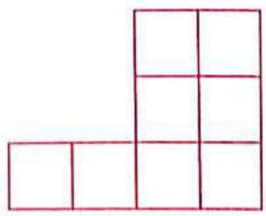
◯ 4 ◯ 5 ◯ 6

## 2 Complete.

a) 935,429 = ____ + ____ + 5,000 + ____ + ____ + 9

b) 28 ÷ ____ = 7

c) The perimeter of the opposite figure = ____ units.



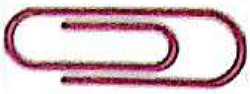
d) 70 mm = ____ cm

e) The value of the digit 0 in the number 30,248 is ____

f) 9 × 7 = ____

## 3 Answer the following.

ⓐ Measure the length of each object.







______ mm ______ mm ______ mm

ⓑ Find the result.

(1) 7,850 – 1,700 = ______

(2) 354 + 27 + 17 + 833 = ( ______ ) + ( ______ )

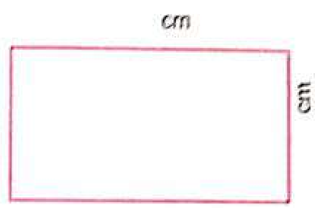
= ______

ⓒ Join.

| 3 × 8 | 7 × 2 | 3 × 4 | 8 × 0 |
|---|---|---|---|
| 20 – 6 | 2 × 6 | 7 × 0 | 4 × 6 |

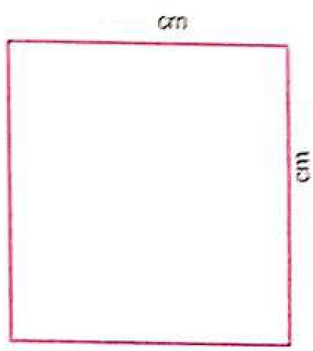
ⓓ What number will the minute hand point to when 10 minutes have passed ? ______

ⓔ Find the area and the perimeter of each of the following.




Area = ______ square centimeters

Perimeter = ______ cm

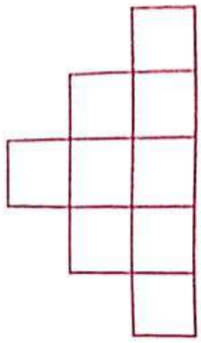



Area = ______ square centimeters

Perimeter = ______ cm

# Model 9

## 1 Choose.



(a) 6 × ........ = 48

◯ 7 ◯ 8 ◯ 9

(b) The area of the opposite figure is ........ 

◯ 9 ◯ 12 ◯ 15

(c) 5 × 300 = ........ tens

◯ 1,500 ◯ 150 ◯ 15

(d) 99 × 1 ☐ 99 + 1

◯ > ◯ < ◯ =

(e) 50,000 + 700,000 + 3 + 40 + 800 = ........

◯ 57,348 ◯ 843,705 ◯ 750,843

(f) 58 cm = ........ mm

◯ 58 ◯ 580 ◯ 5,800

## 2 Complete.

(a) The perimeter of the triangle whose side lengths are 4 cm , 5 cm and 8 cm is ........ cm

(b) The trapezium has ........ pair(s) of parallel sides and the parallelogram has ........ pair(s) of parallel sides.

(c) The value of the digit 0 in the number 904,526 is ........ and its place value is ........

(d) 7 × ...... = (7 × 4) + (2 × 7)

(e) 2,590 + 3,628 = ........

(f) The factors of 8 are ........ , ........ , ........ , ........

## 3 Answer the following.

(a) Show 5 groups of 4 by drawing circles and dots and find the product.

(b) Find the results.

$$\begin{array}{r} 9 \\ \times\ 9 \\ \hline \end{array} \qquad \begin{array}{r} 8\ 0\ 2 \\ -\ \ 4\ 6 \\ \hline \end{array}$$

(c) Draw a rectangle on the grid of area 20 square units and find its perimeter.

(d) Sarah saw some dogs in a park.
She counted 32 legs.
How many dogs did Sarah see ?

(e) Draw the clock hands , write the time in the digital clock to show the time "quarter to 4"




__ : __

(f) Convert the same information from the tally table into a pictograph.

| Favorite fruit | |
|---|---|
| **Fruit** | **Tally** |
| Banana | 𝍸 𝍸 \|\| |
| Mango | 𝍸 \|\|\| |
| Apple | 𝍸 𝍸 \|\|\|\| |
| Grapes | 𝍸 \| |

| Favorite fruit | |
|---|---|
| Banana | |
| Mango | |
| Apple | |
| Grapes | |

Key ♡ = 2 votes

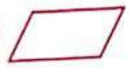
# Model 10

## 1 Choose.

ⓐ 374,261 ☐ 382,000

◯ > ◯ < ◯ =

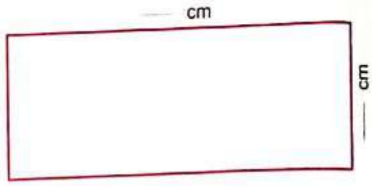
ⓑ ______ is a polygon in which each 2 opposite sides are parallel.

◯  ◯  ◯ 

ⓒ 3 × ______ = 18

◯ 5 ◯ 6 ◯ 7

ⓓ The area of the opposite figure = ______ square centimeters.




◯ 14 ◯ 20 ◯ 10

ⓔ ______ is a unit to measure capacity.

◯ Kilogram ◯ Meter ◯ Liter

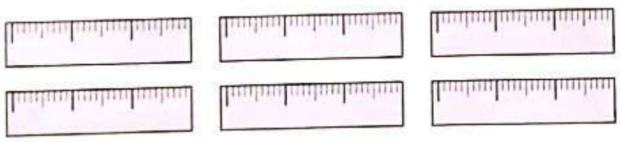
ⓕ 12 coins is divided among 4 money boxes , each box has ______ coins.

◯ 2 ◯ 3 ◯ 5

## 2 Complete.

ⓐ ______ cm = 50 mm

ⓑ The factors of 10 are ______ , ______ , ______ , ______

ⓒ 

______ rows of ______ or ______ columns of ______

ⓓ 30,000 + 70 + 5,000 = ______ (in standard form)

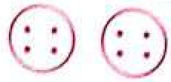
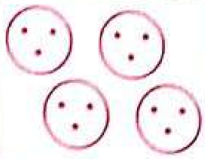
ⓔ 8 × 7 = ______

ⓕ The other fact families of 2 × 8 = 16

are ___ × ___ = ___ | ___ ÷ ___ = ___ | ___ ÷ ___ = ___

## 3 Answer the following.

**a** Complete the table.

| Equal groups | Model | Addition sentence | Multiplication sentence |
|---|---|---|---|
|  | ........ groups of ........ | ........ | ........ |
|  | ........ groups of ........ | ........ | ........ |

**b** Find the result.

(1) 7,452 + 9,541 = ........

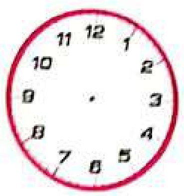
(2) 8,600 – 7,434 = ........

(3) 20 ÷ 5 = ........

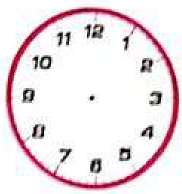
(4) 7 × 7 = ........

(5) 3 × 70 = ........

**c** Draw the clock hands.

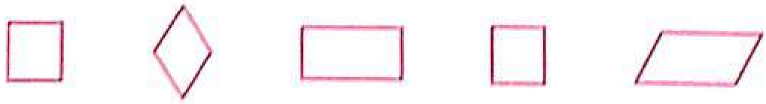


It is quarter to 11



9 : 25

**d** Circle the shapes that have 4 equal sides and underline the shapes that have 4 similar vertices.



# Model 11

## 1 Choose.

ⓐ Six thousand , five hundred two in standard form is ..........

◯ 6,520 ◯ 6,502 ◯ 6,052

ⓑ $5 \times 9 =$ ..........

◯ 35 ◯ 40 ◯ 45

ⓒ The estimated length of the opposite object = ..........



◯ 10 mm ◯ 10 cm ◯ 10 m

ⓓ $40 \div 5$ ☐ $2 \times 4$

◯ > ◯ < ◯ =

ⓔ 700,000 = .......... hundreds

◯ 7,000 ◯ 700 ◯ 70

ⓕ 17 L = .......... mL

◯ 17 ◯ 1,700 ◯ 17,000

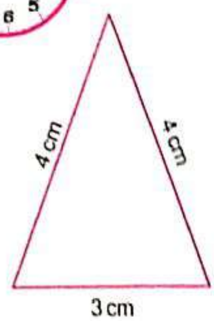
## 2 Complete.

ⓐ Sarah went to a party at 7:00, the party finished at



, the time period of the party = .......... minutes.

ⓑ The perimeter of the opposite triangle = .......... cm



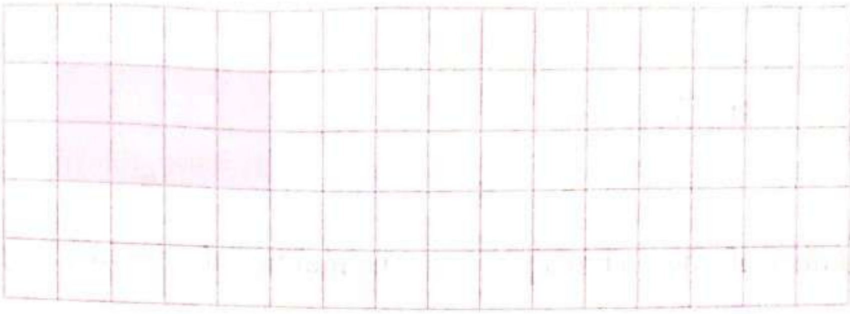

ⓒ $500,000 + 40 + 700 =$ ..........

ⓓ $0 \times 8 =$ ..........

ⓔ Liter is a unit used to measure ..........

**3** **Answer the following.**

ⓐ Draw a rectangle of the same area of the drawn rectangle in the grid.



ⓑ The school library had 7,530 books for borrowing. During one week 2,370 of them were borrowed. How many books were left ?

..........................................................................................

..........................................................................................

ⓒ Complete the table.

| Shape | Name | Number of sides | Number of vertices |
|---|---|---|---|
|  | .......... | .......... | .......... |
|  | .......... | .......... | .......... |
|  | .......... | .......... | .......... |

ⓓ Complete the tally table , then answer the questions

- What is the number of children liked blue ? ..........
- Which color is liked the most ? ..........
- How many more children liked blue than red ? ..........

**Favorite color**

| Color | Tally | Number |
|---|---|---|
| Red | \|\|\| | .......... |
| Blue | 卌 \|\| | .......... |
| Yellow | 卌 卌 \| | .......... |
| Black | \|\|\|\| | .......... |

# Model 12

## 1 Choose.

(a) 2 × 4 ☐ 81 ÷ 9

○ >　　○ <　　○ =

(b) The number of sides in hexagon ☐ the number of sides in octagon.

○ >　　○ <　　○ =

(c) .............. is a multiple of 7

○ 12　　○ 14　　○ 16

(d) The value of the digit 6 in the number 726,001 is ..............

○ 600,000　　○ 60,000　　○ 6,000

(e) 8 + 8 + 8 + 8 = ..............

○ 8 × 2　　○ 8 × 8　　○ 8 × 4

(f) 500 hundreds = .............. thousands

○ 5　　○ 50　　○ 500

## 2 Complete.

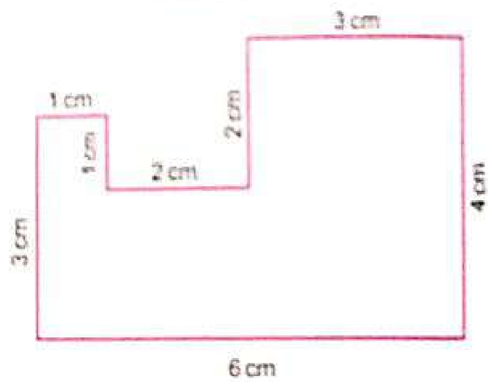
(a) 200,000 + 200 + 2 = .............. (in standard form)

(b)  .............. (in the same pattern)

(c) 5 × 3,000 = ..............

(d) The digital time which represents "quarter past 7" is ☐ : ☐

(e) The perimeter of the opposite figure is .............. cm




(f) 4,546 – 289 = ..............

## 3 Answer the following.

(a) Measure the length of the line segment. Complete.

______ cm, ______ mm

(b) A T.V show ended at 9:00 It lasted for 40 minutes.
What time did the T.V show start ? ______
Draw the clock hands.




(c) Arrange the following from greatest to least.
7,000 + 785 – 70,000 + 7,850 – Seven hundred thousand , eighty five – 707,850 – 778,500
The order is : ______ , ______ , ______ , ______ , ______

(d) Color the graduated cylinder according to the following

Each  contains 10 mL






(e) Three boxes filled with books were just delivered to the library. If each box is filled with 325 books.
How many books were delivered ?

______

______

(f) Use the line plot to answer the questions.

- How many children in the class are 10 years old ? ______ children.
- What age is the smallest number of children ? ______ years old.
- How many more children are 11 years than 13 years ? ______ children.
- How many children are joining the music class in all ? ______ children.

